FE 241
WIRE DRAG

L-1371/82

Diagrams 1211-3,1212-2,1213-4

1210-4

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ... Wire Drag

Field No. ... R/H-20-2-82

Registery No. ... FE-241WD

LOCALITY

State ... Rhode Island--Connecticut

General Locality ...

Sublocality ... Rhode Island Sound and Long Island Sound

1982-84

CHIEF OF PARTY
R.C. Arnold, D.D. Winter, R.K. Norris

LIBRARY & ARCHIVES

DATE ... May 18, 1989

☆U.S. GOV. PRINTING OFFICE: 1985—566-054

FE 241
WIRE DRAG

NOAA FORM 77-28 (11-72) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | REGISTER NO.

HYDROGRAPHIC TITLE SHEET

FE-241WD

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

FIELD NO. 20-1-82 - 20-09-82 *

State Massachusetts, ~~Rhode Island~~, OK Connecticut, OK ~~New York~~

General locality ~~Southern Coast of New England~~

Locality Rhode Island/Long Island Sounds

Scale 1:20,000 Date of survey 16 July - 10 November 1982

Instructions dated 13 April 1982 Project No. OPR-B660-RU/HE-82

Vessel NOAA Ships RUDE & HECK

Chief of party LCDR Russell C. Arnold

Surveyed by LCDR Russell C. Arnold, LCDR Donald D. Winter, LT(JG) J.W. Bailey, ENS Barnum

Soundings taken by echo sounder, ~~hand lead, pole~~ Raytheon DE-719

Graphic record scaled by J. W. Bailey/S. R. Barnum

Graphic record checked by J.W. Bailey/ S. R. Barnum

Protracted by N/A Automated plot by N/A

Limited Verification by Hydrographic Surveys Branch, AMC

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~ ~~Predicted tides~~ Smooth Tide applied to the Verified Data

REMARKS: All times recorded in G.M.T.

* Registered under Field No. R/H-20-2-82

The Descriptive Report for Field No. R/H-5-1-83, R/H-5-3-83, R/H-10-2-83, & R/H-5-1-84 is attached to this report.

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1976—665-661/1222 REGION NO. 6

CONTENTS

✳ = Data removed from the Descriptive Report and filed with the field records.

DESCRIPTIVE REPORT
to accompany
WIRE DRAG SURVEY B660-RU/HE-82, FE-241WD
Massachusetts, R.I., Conn., N.Y.
Southern New England Coast
Rhode Island/Long Island Sounds

A. AUTHORITY

This project was conducted in accordance with Hydrographic Project Instructions, OPR-B660-RU-HE-82, Wire Drag, Southern New England Coast, dated 13 April 1982. Project Instructions and Changes were issued by Associate Director, Marine Surveys and Maps, and forwarded via the Director, Atlantic Marine Center. Four changes to original Project Instructions were received during this survey; changes 1, 2, 3 and 4 dated 20 August 1982, 22 September 1982, 23 September 1982, and 7 October 1982 respectively.

B. CHARACTER AND LIMITS OF WORK

The purpose of this project was to verify or disprove existence of ten (10) submerged wrecks and one (1) shoal along the south coast of New England, specifically Rhode Island and Long Island Sounds, and to provide clearance depths over these sites. In addition, a Wire Drag Survey of the Northville Oil Terminal Platform and proposed deep water approaches was requested on 22 September 1982 (Change Number 2 to Project Instructions). This Wire Drag Survey was conducted at the request of the US Coast Guard to ensure that no underwater obstructions exist which would affect safe navigation of deep-draft vessels in this area.

The assigned scale of the survey was 1:20,000. Ship drags were plotted at 1:20,000 scale, while all launch drags were plotted at 1:5,000 scale. Ship/launch junctions were plotted at 1:5,000 scale to ensure adequate overlap. Data collected during this project will affect the following NOS Charts: 12300, 12354, 12358, 12359, 12363, 12364, 12369, 12371, 12372, 13205 and 13218.

C. CONTROL

Vessel positioning for all work (side scan, diver investigation, and wire drag) was accomplished with the Del Norte 520 series electronic positioning equipment operated at a frequency of 9400 MHZ. All control stations occupied during this survey were of Third Order, Class I positional accuracy standards or better. A complete list of signals can be found in Appendix G. Applicable hydrographic and wire drag control station information is listed below:

Not Verified

ITEM 1:

R_1 Goose
Latitude 41° 29' 04.801" North
Longitude 071° 02 18.407" West

R_2 Cuttyhunk Light
Latitude 41° 24' 51.805" North
Longitude 070°57' 00.334" West
&
R_1 Beavertail Lighthouse
Latitude 41°26' 57.348" North
Longitude 071° 23' 59.693" West

R_2 Goose
Latitude 41°29' 04.801" North
Longitude 071° 02' 18.407" West

ITEMS 2 & 3:

R_1 Point Judith Lighthouse
Latitude 41° 21' 39.323" North
Longitude 071°28' 54.826" West

R_2 Beavertail Lighthouse
Latitude 41° 26' 57.348" North
Longitude 071° 23' 59.693" West

ITEMS 4 & 5:

R_1 Falkner Island Lighthouse
Latitude 41° 12' 42.701" North
Longitude 072° 39' 14.608" West

R_2 Saybrook Lighthouse
Latitude 41° 16' 16.894" North
Longitude 072° 20' 37.013" West

Not Verified

ITEM 6:

R_1 Falkner Island Lighthouse
Latitude 41° 12' 42.701" North
Longitude 072° 39' 14.608" West

R_2 Saybrook Lighthouse
Latitude 41° 16' 16.894" North
Longitude 072° 20' 37.013" West

R_1 Horton Point Light Tower
Latitude 41° 05' 07.028" North
Longitude 072° 26' 45.981" West

R_2 Tank #8
Latitude 40° 58' 47.362" North
Longitude 072° 38' 49.172" West

ITEM 7:

R_1 New Haven Lighthouse Old Tower
Latitude 41° 14' 55.931" North
Longitude 072° 54' 15.238" West

R_2 Falkner Island Lighthouse
Latitude 41° 12' 42.701" North
Longtiude 072° 39' 14.608" West

R_1 Stratford Point Lighthouse
Latitude 41° 09' 06.799" North
Longitude 073° 06' 13.577" West

R_2 New Haven Lighthouse Old Tower
Latitude 41° 14' 55.931" North
Longitude 072° 54' 15.238" West

ITEM 8:

New Haven Lighthouse Old Tower
Latitude 41° 14' 55.931" North
Longitude 072° 54' 15.238" West

R_2 Falkner Island Lighthouse
Latitude 41° 12' 42.701" North
Longitude 072° 39' 14.608" West

Not Verified

ITEM 9:

R_1 Stratford Point Lighthouse
Latitude 41° 09' 06.799" North
Longitude 073° 06' 13.577" West

R_2 New Haven Lighthouse Old Tower
Latitude 41° 14' 55.931" North
Longitude 072° 54' 15.238" West

R_1 Old Field Point Beacon
Latitude 40° 58' 36.858" North
Longitude 073° 07' 08.415" West

R_2 Stratford Point Lighthouse
Latitude 41° 09' 06.799" North
Longitude 073° 06' 13.577" West

ITEM 10:

R_1 Stratford Point Lighthouse
Latitude 41° 09' 06.799" North
Longitude 073° 06' 13.577" West

R_2 Old Field Point Beacon
Latitude 40° 58' 36.858" North
Longitude 073° 07' 08.415" West

ITEM 11:

R_1 Old Field Point Beacon
Latitude 40° 58' 36.858" North
Longitude 073° 07' 08.415" West

R_2 Stratford Point Lighthouse
Latitude 41° 09' 06.799" North
Longitude 073° 06' 13.577" West

Northville
Oil Terminal
& Approaches:

R_1 Horton Point Light
Latitude 41° 05' 07.028" North
Longitude 072° 26' 45.981" West

R_2 Tank #8
Latitude 40° 58' 47.362" North
Longitude 072° 38' 49.172" West

D. CALIBRATION AND SHORE SIGNALS Not Verified

Daily opening and closing calibrations were performed as "go - no go" checks with daily correctors being compared to the baseline calibrations. A variety of calibration methods were used during this project with all corrector values being within prescribed limits (see Appendix A).

Five baseline calibrations were performed during this project. All baseline calibrations were conducted in the immediate work area and entirely overwater. Baseline calibration distances were determined by the Ranger II distance measuring instrument (serial number 1075). The following is a list of the baseline calibrations:

Date	Location	Baseline Distance
15 August, 1982	Newport Naval Base Pier Newport, R.I.	1933.68 m
16 July, 1982	Newport Naval Base Pier Newport, R.I.	1933.68 m
9 September, 1982	New Haven Coast Guard Pier New Haven, CT.	2467.9 m
6 October, 1982	Bayles Dock Port Jefferson, N.Y.	3281.76 m
12 November, 1982	Bayles Dock Port Jefferson, N.Y.	3281.76 m

After theft of the original remote code 74 located at Falkner Island Lighthouse, a spare remote code 78 was altered internally to code 74, necessitating a baseline calibration of this unit on 9 September, 1982.

Daily calibrations were performed by:

1. Circle calibration around Brenton Reef Light Tower and Buzzards Bay Light Tower (Items 1,2,3).

2. Range Calibration (Front object - New Haven Light, Rear - West Haven Shinglehill Standpipe) with precomputed sextant angles and Del Norte ranges. Appropriate information can be referenced in the sounding volumes (Items 7,8,9).

3. Various 3-point sextant fixes with check fix (Items 4,5,6,9,10,11).

4. Fixed point calibrations at Kelsey Point Light (R_1 Falkner Island Lighthouse and R_2 Saybrook Lighthouse), and Northville Oil Platform East Mooring Dolphin (R_1 Horton Pt Lt - R_2 Tank #8). Position of dolphin computed by ship's personnel (traverse methods).

E. DATES OF SURVEY

The project began 16 July, 1982 and was completed ~~12 November, 1982.~~ 16 June, 1984 *

* See the 1983-84 Descriptive Report combined with this report.

F. TIDE REDUCERS

Field reductions of each day's work were accomplished using predicted tides for the reference stations; Newport Rhode Island (Items 1, 2 & 3) and Bridgeport, Connecticut (Items 4-11 and Northville Oil Terminal).

G. JUNCTIONS AND SPLITS – See section 5. of the Addendum to the Descriptive Report

There were no junctions during this survey. One split located at Latittude 41° 00' 23.0" N, Longitude 072° 39' 13.7" W occurred on JD307, strip 01. This "holiday" was a product of the "F" buoy bouncing during ship drag operations, preventing proper coverage of this area. However, this grounding was temporary with buoy refloating indicating area clear of obstructions.

H. INCOMPLETE ITEMS See section 7.c. of the Addendum to the Descriptive Report.

Item 3 requires further investigation in the vicinity of the updated, reported position of wreck. Northville Oil Platform and approaches were 60% completed. The inshore portion (priority section) was completed, leaving the northern approach section to be accomplished.

I. CURRENTS AND WINDS

Currents and winds encountered during the Rhode Island Sound section of this project posed no significant problelms. Variable currents usually less than one knot did not affect operations. However, currents encountered during the Long Island Sound survey proved to be a problem. Strong tidal currents, at times in excess of two knots, in the vicinity of Items 6, 7 and Northville area required planning drag and diving operations at slack water. Currents in and around Northville Oil Platform did not conform to tabulated predictions. Many times currents reversed direction as much as an hour before actual predictions. Drag operations (ship and launch) for Northville area were conducted with the setting currents (Flood 270° T, Ebb 050° T).

Strong northwest and northeast winds, common during the late Fall, greatly affected both ship and launch operations during the Northville survey.

J. EQUIPMENT AND TECHNIQUES

I. Survey Operations:

Standard ship and launch drags were conducted whenever possible. Drag operations were limited by existing lobster pots. All launch drags and several of the ship drags were controlled by following Del Norte Arcs. Ship drags, Northville survey, were conducted by steering gyro compass courses while running with prevailing tidal currents.

Side scan operations were conducted where dragging was not possible. Coverage was accomplished as per project instructions (AWOIS Listing). Reduced line spacing was employed on most side scan items to maximize bottom coverage. See Section III, Summary of Results for individual item side scan range settings. Side scan operations proved to be quite a valuable tool during this survey, giving the ship an alternate investigation method with quick contact of some items.

Three additional control stations were located by ship's personnel during this project. These control stations were not intended to be monumented. STATIONS CUTTYHUNK LIGHT, 1982 and TANK #8, 1982 were occupied by electronic navigational control gear for use during the survey. Time did not permit the setting of disks and desired monumentation of these stations. Station NORTHVILLE MOORING DOLPHIN (East) was established as a fixed point calibration sight. The following is a list of the stations:

Not Verified

Name	Method	Computed Position
CUTTYHUNK LIGHT, 1982	Resection	Latitude 41° 24' 51.805" N Longitude 070° 57' 00.334" W
TANK #8, 1982	Resection	Latitude 40° 58' 47.362" N Longitude 072° 38' 49.172" W
NORTHVILLE MOORING DOLPHIN (East), 1982 (Calibration Dolphin)	Traverse	Latitude 41° 00' 02.098" N Longitude 072° 38' 44.971" W

All station positions were computed using the HP 9815 calculator with the geodetic computation package. All horizontal control work and data will be submitted to AMC for verification.

2. Diving Operations: See also section 7. of the Addendum to the Descriptive Report

Diving operations were conducted in accordance with project instructions. Divers obtained least depths on Item 2 and Item 3 (two boulders found during side scan search); Item 7 and Item 8 ("I" beam found during side scan search); and Item 9. Items 6 and 7 required subsequent drag clearance due to poor visibility and least depth uncertainty. Visibility during the Rhode Island Sound section was 15-20 feet, while visibility during the Long Island Sound section was rarely more than 5 feet. Strong tidal currents also hampered diving in Long Island Sound, particularly in vicinity of Items 6 and 7. All least depths were determined via pneumatic depth gauge, which was calibrated at the beginning and conclusion of this project (see Appendix E for calibration). Least depths determined by the pneumatic depth gauge were corrected using the 22 July, 1982 calibration only. Positions on individual items were obtained with Del Norte ranges; position computations were performed using the HP-9815 and geodetic package. Dive Reports for individual item investigation can be found in Appendix F (Dive Reports).

3. Testing:

Standard testing procedures were used throughout this project for both launch and ship drag operations. Numerous tests were performed on each strip.

K. DISCREPANCIES AND COMPARISONS WITH RECENT CHARTS

Please refer to Summary of Results of OPR B66-RU/HE-82 (see section III of this report). No prior survey was available for inshore section of Northville Oil Terminal project, making drag operations difficult in vicinity of shoal areas.

L. PERSONNEL

The officers participating in this survey were: LCDR Russell C. Arnold, LCDR Donald D. Winter, LT(JG) Jonathan W. Bailey, and ENS Steven R. Barnum.

M. GENERAL NOTES

A considerable amount of hydrography reconnaissance and side scan sonar data was collected by both ships during this project. These records were examined by ship's personnel for possible contacts and chart discrepancies. Five items were identified and later diver investigated (Items 2, 3, and 8). See Section III of this report, Summary of Results, OPR-B660-RU/HE-82 for specific results. All sonargrams and fathograms will be forwarded to the Marine Center. It is the opinion of this command that no further verification of these records is required.

N. APPROVAL

All records for this survey are hereby approved. The field work was personally supervised by the undersigned. The field sheets and records were inspected daily. This survey is considered complete and adequate for charting.

Russell C. Arnold

Russell C. Arnold
Commanding Officer
NOAA Ships RUDE & HECK

Appendix C

HORIZONTAL CONTROL

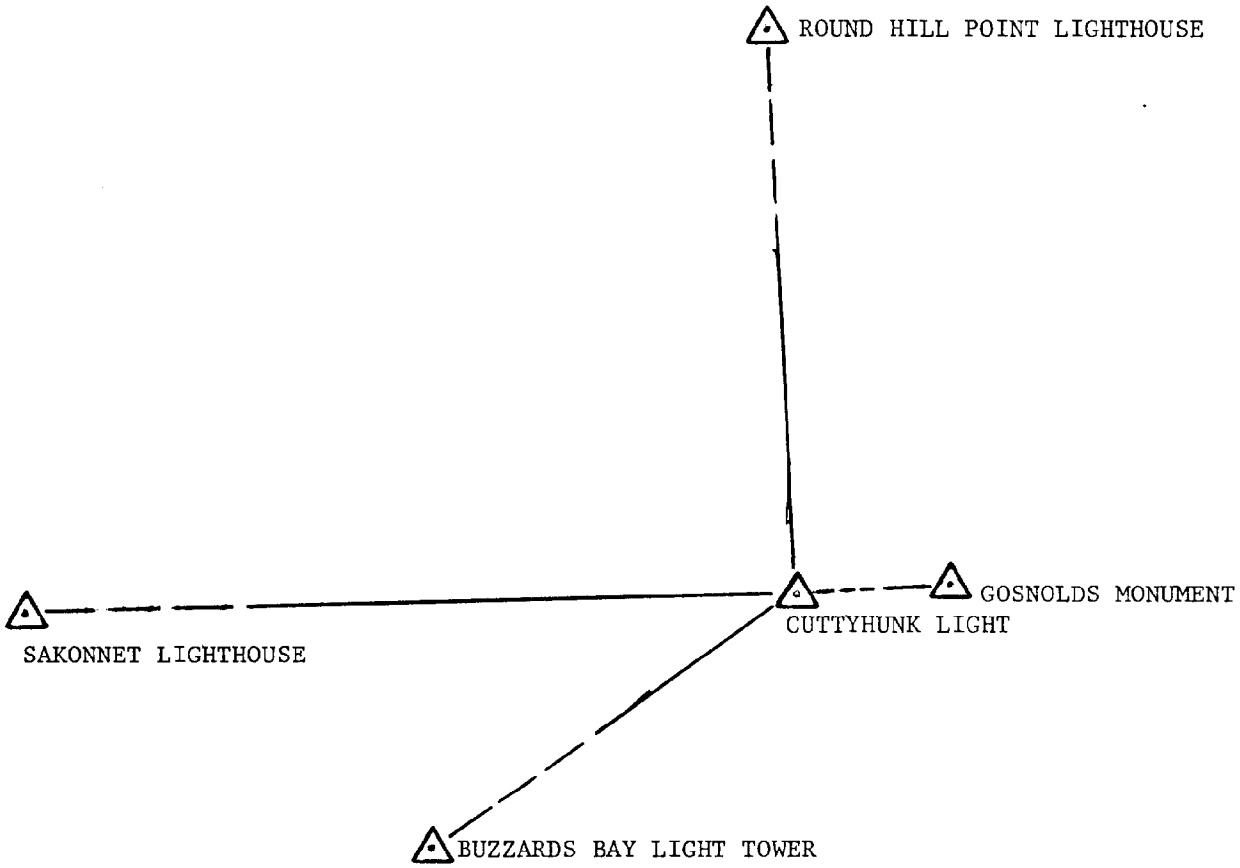
HORIZONTAL CONTROL REPORT
OPR-B660-RU/HE-82

Ship's personnel located three (3) additional control stations during this project. Stations CUTTYHUNK LIGHT, 1982 and TANK #8, 1982 were located by resection methods (see attached sketch) using a T-2 theodolite s/n 35327. Station NORTHVILLE MOORING DOLPHIN (East), Calibration Dolphin, was located by traverse methods (see attached sketch) using a T-2 s/n 35327 and Ranger II (1075). Position computations were performed by HP-9815 calculator and geodetic package tape. All horizontal control data is present in Supplemental Data File accompanying this survey.

Not Verified

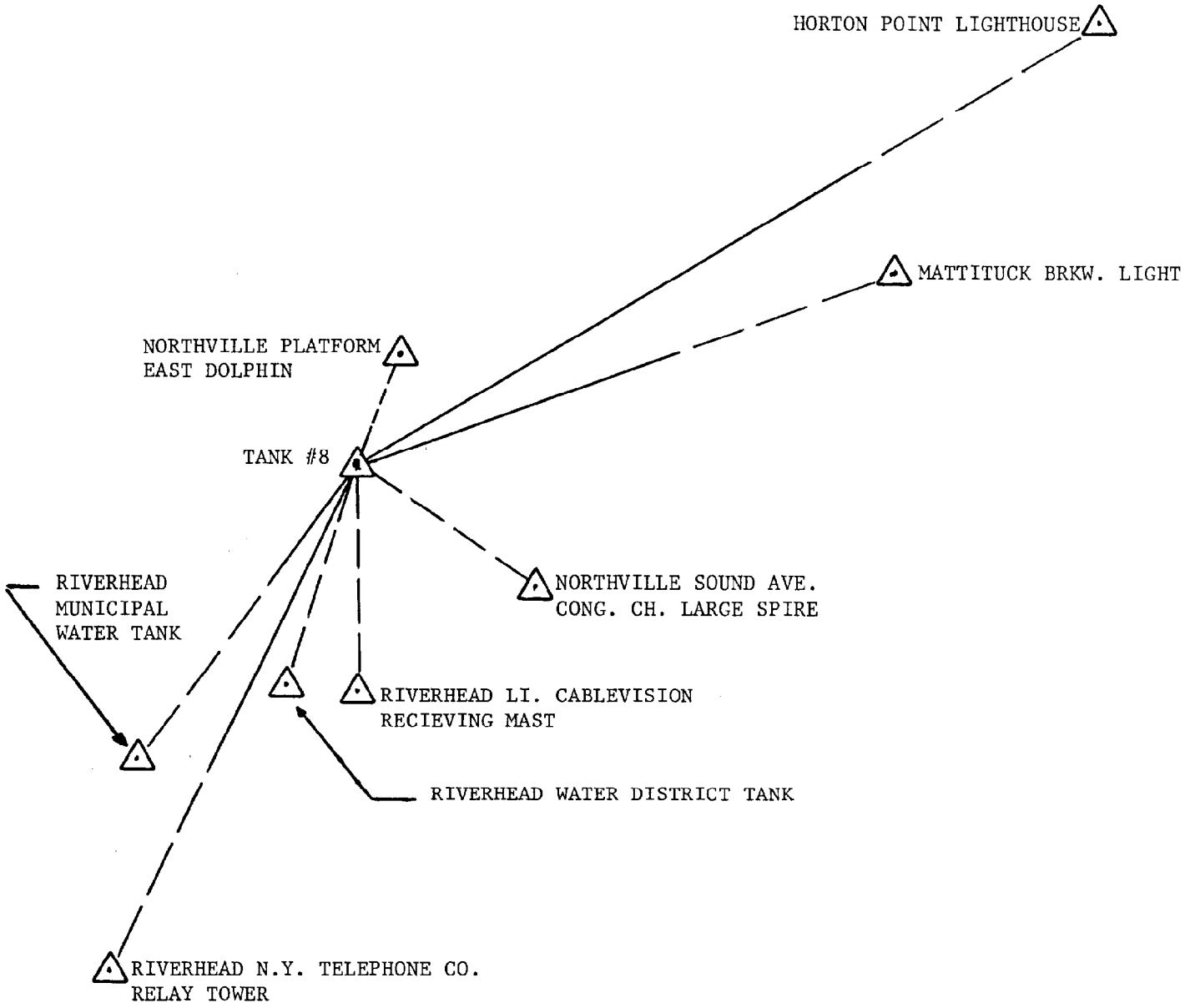
OPR-B660-RU/HE-82
HORIZONTAL CONTROL SKETCH
(STATION:CUTTYHUNK LIGHT)

Not Verified



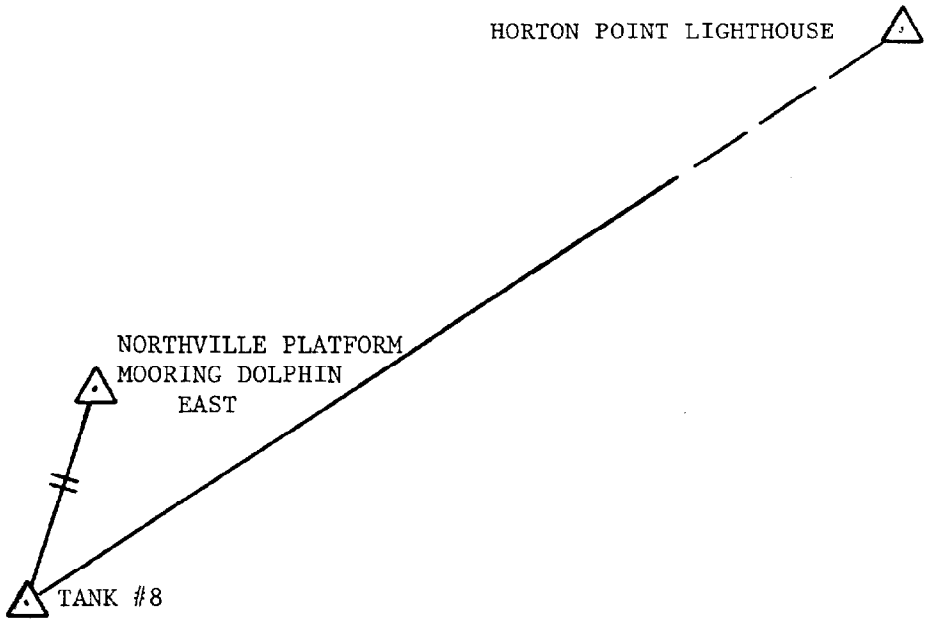
OPR-B660-RU/HE-82
HORIZONTAL CONTROL SKETCH
(STATION: TANK #8)

Not Verified



OPR-B660-RU/HE-82
HORIZONTAL CONTROL SKETCH
(STATION: NORTHVILLE PLATFORM MOORING)
DOLPHIN EAST

Not Verified



Appendix D

SIGNAL LIST

Not Verified

tion#	Station Name	Latitude Longitude	Source	Type
1	New Haven Light	41°13'15.430" N 072°56'33.422" W	NGS-Monumented	Visual
2	New Haven Middle Brkw. West End Light	41°13'27.229" N 072°56'11.308" W	NGS-Monumented	Visual
3	New Haven Middle Brkw. East End Light	41°13'52.659" N 072°55'24.882" W	NGS-Monumented	Visual
4	S.W. Ledge Lighthouse	41°14'03.681" N 072°54'45.178" W	NGS-Monumented	Visual
5	New Haven Lighthouse Old Tower	41°14'55.931" N 072°54'15.238" W	NGS-Monumented	Visual/ Electronic
6	West Haven Singlehill Standpipe	41°15'32.697" N 072°58'19.250" W	NGS-Field Party-Unmonumented	Visual
7	Falkner Island L.H.	41°12'42.701" N 072°39'14.608" W	NGS-Monumented	Electronic
8	Stratford Point Lighthouse	41°09'06.799" N 073°06'13.577" W	NGS-Monumented	Electronic
9	Wildwood State Park Elevated Tank	40°57'48.966" N 072°48'23.609" W	NGS-Monumented	Visual
10	Saybrook Brkw. L.H.	41°15'47.185" N 072°20'35.611" W	NGS-Monumented	Visual/ Electronic
11	Duck Island North Brkw. Light	41°15'36.441" N 072° '536" W	NGS-Monumented	Visual
12	Duck Island West Brkw. Light	41°15'22.266" N 072°29'08.296" W	NGS-Monumented	Visual
13	Kelsey Point Brkw. Light	41°14'36.323" N 072°30'30.849" W	NGS-Monumented	Visual/Fixed Pt. Calibration Sta.
14	Saybrook Lighthouse	41°16'16.894" N 072°20'37.013" W	NGS-Monumented	Electronic
15	Libby's Chimney	41°15'23.512" N 072°28'32.760" W	NGS-Monumented	Visual
16	Port Jefferson. L.I. Light Co. Center Stack	40°57'00.433" N 073°04'45.180" W	NGS-Monumented	Visual

Not Verified

tion#	Station Name	Latitude Longitude	Source	Type
17	Old Field Point Lighthouse	40°58'36.708" N 073°07'08.615" W	NGS-Monumented	Visual
18	Old Field Point Beacon	40°58'36.858" N 073°07'08.415" W	NGS-Monumented	Visual/ Electronic
19	Port Jefferson West Brkw. Light	40°58'13.128" N 073°05'37.328" W	NGS-Monumented	Visual
20	Port Jefferson East Brkw. Light	40°58'19.909" N 073°05'31.345" W	NGS-Monumented	Visual
21	Stratford Shoals Lighthouse	41°03'35.368" N 073°06'06.214" W	NGS-Monumented	Electronic
22	Pecks Ledge Lighthouse	41°04'38.047" N 073°22'12.864" W	NGS-Monumented	Visual
23	Penfield Reef Lighthouse	41°07'01.064" N 073°13'21.122" W	NGS-Monumented	Visual
24	Horton Point Light Tower	41°05'07.028" N 072°26'45.981" W	NGS-Monumented	Electronic
25	Buzzards Bay Light Tower	41°23'47.128" N 071°02'02.492" W	NGS-Monumented	Circle Calibration
26	Goose	41°29'04.801" N 071°02'18.407" W	NGS-Monumented	Electronic
27	Cuttyhunk Light	41°24'51.805" N 070°57'00.334" W	Ship's Personnel	Electronic
28	Point Judith Lighthouse	41°21'39.323" N 071°28'54.826" W	NGS-Monumented	Electronic
29	Beavertail Lighthouse	41°26'57.348" N 071°23'59.693" W	NGS-Monumented	Electronic
30	Brenton Reef Light Tower	41°25'35.071" N 071°23'21.970" W	NGS-Monumented	Circle Calibration
31	Tank #8	40°58'47.362" N 072°38'49.172" W	Ship's Personnel	Electronic
32	Northville Calibration Dolphin	41°00'02.098" N 072°38'44.971" W	Ship's Personnel	Fixed Point Calibration

Appendix F

DIVE REPORTS

OPR- B660

DIVE REPORT

DATE: 23 July 1982

I - LOCATION: Rhode Island Sound (Item #2)

II - SURVEY SHEET: _____ REGISTRY NO. _____ FIELD NO. 20-02-82

III - PURPOSE OF DIVE: Investigate contact from side scan sonargram records

IV - SURVEY PROCEDURE:

A. DETERMINATION OF DIVE SITE: Side Scan

B. SEARCH PROCEDURE & EQUIPMENT: Standard scuba pneumofathometer gage

V - DIVE DATA:

A. DIVERS: LT(SG) Bailey, CTR Smith, AB Pohlmann, OS Conaway

B. BOTTOM TIME: 16 m

C. DEPTH MAX.: 94'

D. CURRENT & VISIBILITY CONDITIONS: 15' visibility, 1/2 - 3/4 knot of current

VI - RESULTS: POSITION NO. 2A

TIME 194500

LEAST DEPTH 65.8'

MAX DEPTH 94'

POSITIONAL DATA - R_1 5582 R_2 13519

VII - RECOMMENDATIONS: Comment: R (Point Judith Lighthouse) R (Beavertail Lighthouse)

See Section III of Descriptive Report

VIII - SKETCH Bow Section

OPR- B660

DIVE REPORT

DATE: 27 July 1982

I - LOCATION: Rhode Island Sound, (Item #2)

II - SURVEY SHEET: _____ REGISTRY NO. _____ FIELD NO. 20-02-82

III - PURPOSE OF DIVE: Investigate side scan contact

IV - SURVEY PROCEDURE:

A. DETERMINATION OF DIVE SITE: Side Scan

B. SEARCH PROCEDURE & EQUIPMENT: Standard Scuba, Pneumofathometer gage

V - DIVE DATA:

A. DIVERS: LT(JG) Bailey, CET Smith, AS Ackerman, OS Conway

B. BOTTOM TIME: 18m

C. DEPTH MAX.: 87'

D. CURRENT & VISIBILITY CONDITIONS: 15-20' visibility, Current light.

VI - RESULTS: POSITION NO. 23

TIME 191800

LEAST DEPTH 64.8

MAX DEPTH 87'

POSITIONAL DATA - R_1 5849 R_2 13933

VII - COMMENTS RECOMMENDATIONS: R_1 (Point Judith Lighthouse) / R_2 (Beavertail Light House)

See Section II of D.S.

VIII - SKETCH Stern section Item #2

OPR- B660

DIVE REPORT DATE: 13 August 1983

I - LOCATION: Rhode Island Sound (Item # 3)

II - SURVEY SHEET: _____ REGISTRY NO. _____ FIELD NO. 20-02-82

III - PURPOSE OF DIVE: Investigate two contacts from side scan sonargram records.

IV - SURVEY PROCEDURE:

A. DETERMINATION OF DIVE SITE: Side scan sonar

B. SEARCH PROCEDURE & EQUIPMENT: Standard Scuba, Pneumofathometer gage

V - DIVE DATA:

A. DIVERS: AB Nutchmen, JS Carraway

B. BOTTOM TIME: 31 m

C. DEPTH MAX.: 60'

D. CURRENT & VISIBILITY CONDITIONS: 15' visibility currents light variable

VI - RESULTS: POSITION NO. 34

TIME 1530

LEAST DEPTH ~~60½'~~ ~~80~~ 48½'

MAX DEPTH ~~60½'~~ 59'

POSITIONAL DATA - R_1 5260 R_2 16175

VII - Comments RECOMMENDATIONS: 1. (Point Judith Lighthouse) R (Beavertail Lighthouse) See Section III of Descriptive Report

VIII - SKETCH Rock

34

OPR- Bl660

DIVE REPORT

DATE: 13 August 1982

I - LOCATION: Rhode Island Sound (Item #3)

II - SURVEY SHEET: _____ REGISTRY NO. _____ FIELD NO. 20-07-82

III - PURPOSE OF DIVE: Investigate contact from side scan records

IV - SURVEY PROCEDURE:

A. DETERMINATION OF DIVE SITE: Side scan

B. SEARCH PROCEDURE & EQUIPMENT: Standard Scuba and Fathometer gear

V - DIVE DATA:

A. DIVERS: Leon D. Winter, LT(SG) Bailey

B. BOTTOM TIME: 30'

C. DEPTH MAX.: 71'

D. CURRENT & VISIBILITY CONDITIONS: visibility 20', currents light and variable

VI - RESULTS: POSITION NO. 3B

TIME 1745

LEAST DEPTH ~~55.0~~ 32'

MAX DEPTH 67'

POSITIONAL DATA - R_1 7380 R_2 17860

VII - RECOMMENDATIONS: (Comments) R1 (Point Judith Lighthouse) R2 (Beavertail Lighthouse) See Section III of Descriptive Report

VIII - SKETCH Rock

OPR- B660

DIVE REPORT DATE: 20 Aug 1982

I - LOCATION: Long Island Sound, Item #7

II - SURVEY SHEET: _____ REGISTRY NO. _____ FIELD NO. 20-04-82

III - PURPOSE OF DIVE: Investigate wire drag hang

IV - SURVEY PROCEDURE:

A. DETERMINATION OF DIVE SITE: Wire Drag

B. SEARCH PROCEDURE & EQUIPMENT: Standard Scuba, Pneumofathometer gage

V - DIVE DATA:

A. DIVERS: CET Smith, AD Aitchison

B. BOTTOM TIME: 16 min.

C. DEPTH MAX.: 60'

D. CURRENT & VISIBILITY CONDITIONS: 4' visibility ← poor visibility

VI - RESULTS: POSITION NO. 8, 9
TIME 1704, 1709
LEAST DEPTH 45½'
MAX DEPTH 60'

Not considered a least depth. See Section III, Item 7, page 61 of this report.

POSITIONAL DATA - R_1 16574 R_2 10119

VII - RECOMMENDATIONS: Cannot R1 (New Haven Old Light Tower)
R2 (Falkner Island Lighthouse)
See Section III of Destructive Report

VIII - SKETCH Wooden Drydock

OPR-B660

DIVE REPORT

DATE: 10 September 1982

I - LOCATION: Long Island Sound, Item #8

II - SURVEY SHEET: _____ REGISTRY NO. _____ FIELD NO. 20-05-82

III - PURPOSE OF DIVE: Investigate side scan contact vicinity item #8.

IV - SURVEY PROCEDURE:

A. DETERMINATION OF DIVE SITE: Side scan sonar

B. SEARCH PROCEDURE & EQUIPMENT: Standard scuba, 100' search line, Brunsfathometer gage.

V - DIVE DATA:

A. DIVERS: LT(jg) Bailey, AD Aitchison, IS Carraway

B. BOTTOM TIME: 41 M

C. DEPTH MAX.: 30'

D. CURRENT & VISIBILITY CONDITIONS: 5' visibility, current light

VI - RESULTS: POSITION NO. 1149

TIME 1834

LEAST DEPTH 25'

MAX DEPTH 26½'

POSITIONAL DATA - R_1 19305 R_2 3024

VII - RECOMMENDATIONS: Comments: R_1 (Stratford Point Lighthouse) R_2 (New Haven Old Light Tower)

See Section III of Descriptive Rpt.

VIII - SKETCH Steel "I" Beam

Appendix H

LOCAL NOTICE TO MARINERS REPORTS

50
U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA SHIPS RUDE & HECK
439 West York St.
Norfolk, VA 23510

September 30, 1982

To: Commander, 1st Coast Guard District
150 Causeway St.
Boston, MA 02114
ATTN: Notice to Mariners Branch

From: LCDR Russell C. Arnold
Commanding Officer

Subj: Notice to Mariners

Recent survey operations conducted by the NOAA Ships RUDE and HECK in the vicinity of Buoy R"2" off Point Judith, Rhode Island, revealed the existence of two large uncharted boulders. The first boulder, located at Latitude 41°18'50.194"N, 71°28'19.474"W, had a least depth of 48.5 feet in general surrounding depths of 59 feet. The second boulder, located at Latitude 41°17'45.094"N, Longitude 71°27'50.306"W, had a least depth of 51.0 feet in general surrounding depths of 67 feet.

Deep draft vessels should note the above information and exercise caution when transiting this area.

cc: OA/C351
CAM 1

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA SHIPS RUDE & HECK
439 West York St.
Norfolk, VA 23510

September 30, 1982

To: Commander, Third Coast Guard District
Governors Island, NY 10004

Russell C Arnold

From: LCDR Russell C. Arnold
Commanding Officer

Subj. Notice to Mariners

Recent survey operations conducted by the NOAA Ships RUDE and HECK in the vicinity south of the New Haven Harbor East Breakwater revealed the existence of a 25-foot long steel I-beam lying on the bottom at Latitude 41°13'22.175"N, Longitude 72°53'37.334 West. Least depth over this I-beam was 25.0 feet in general surrounding depths of 26.5 feet.

cc: OA/C351
CAM 1

56 See also the Addendum to the Descriptive Report.

SECTION III

SUMMARY of the RESULTS
OPR-B660-RU/HE-82
Wire Drag, Southern New England Coast

This project consisted of two basic types of operations:

A. Individual Item Investigation (ship and launch drags, side scan sonar, and diver investigation).

B. Wire Drag Survey of Northville Oil Platform and proposed deep-water approaches.

A. INDIVIDUAL ITEM INVESTIGATIONS:

ITEM I (AWOIS # 1898)

(27' Cabin Cruiser sunk in 1969 at 41° 25' N, 71° 05' W in approximately 67 feet of water)

The entire item investigation was conducted via side scan sonar search from 5 August 1982 (JD217) to 12 August (JD224). Bottom coverage was accomplished by 100 meter line spacing with a range scale setting of 100 meters while following arcs from R1, GOOSE (1943), and R2, CUTTYHUNK LIGHT (1982). Wire drag operations were attempted on two days, but were not successful due to numerous lobster pots and coarse, rocky, irregular bottom characteristics. Several contacts of significance were abstracted with least depth, size, and location determinations made by interpreting side scan records. These contacts were compared to prior surveys and the latest edition of the chart, both of which indicated similar depths in the area.

Portions of the investigated area contained large rocks and boulders (any of which would be larger than the item in question). These areas have been defined and outlined on the enclosed photocopy of prior survey. Significant items are also plotted and labeled on this copy.

CHARTING RECOMMENDATIONS: As per Section 7.12.2 Project Instruction, Change #1, Item Disproval Section, 400% bottom coverage was obtained during this search. Due to the aforementioned bottom characteristics, the item was not located. Although the existence of this item was not conclusively disproved, Item #1 constitutes no hazard to navigation. Replace the dangerous sunken wreck symbol with a non-dangerous sunken wreck symbol. Do not concur. See the Addendum.

AREA OF NUMEROUS BOULDERS & LARGE ROCKS
IB
ID
ITEM #1
IC
1NM
IA
2NM

See also the Addendum to the Descriptive Report

ITEM 2 (AWOIS # 1874 - Bow & 2712 - Stern)

(5,353-ton Vessel BLACKPOINT, torpedoed in 1945 in approximately 50 feet of water at 41° 19' 42" N, 71° 25' 48" W)

Side scan operations began 20 July 1982 (JD201) and were concluded on 21 July 1982 (JD202). The item was found broken up into two (2) sections, bow and stern. Local information obtained from the R/V (dive boat) WAHOO verified this fact. On 23 July 1982, diver investigation on bow section revealed a reduced least depth of 65.8 feet in surrounding depths of 90-95 feet of water. Due to relative deep depths, exact dimensions of the vessel were not obtainable. However, subsequent dives indicated that the least depth lies at extreme end of bow section at 41° 19' 46.642" N, 71° 25' 46.97" W. The vessel lies approximately 320° T, keel up in a very stable position. On 27 July 1982 (JD208), diver investigation on stern section revealed a reduced least depth of 64.8 feet in surrounding 83-87 feet of water. The stern section was considerably smaller than the main bow (hull) section. Least depth was obtained on the after gun mount at position 41° 19' 33.049" N, 71° 25' 47.480" W. This section also is very stable at its present position.

Entered mtm 6/29/89

CHARTING RECOMMENDATIONS: Present charted position of this wreck does not adequately include position of stern section at 41° 19' 33.049" N, 71° 25' 47.480" W. Recommend additional wreck symbol be added at computed stern section position. Charted position of wreck does adequately mark bow section. Reduced least depth found 64.8 feet. — See the Addendum - section 7.b.

ITEM 3 (AWOIS # 1865)

(60-foot F/V SHEARWATER, sunk in 1974 in approximately 60 feet of water, mast reported 10 feet below surface at position 41° 18' 06" N, 71° 28' 00" W)

Several local contacts were made prior to the beginning of this item investigation. The following is a list of those contacts and dispostion of each:

1. U.S. Army Corps of Engineers, Waltham, MA, (no usable information, phone (617) 647-8526/8322).

2. Northeast Pilots Association, (401) 847-9050. Captain of the Pilots Association indicated a salvage attempt was made on the vessel during the summer of 1974 by Sanchez Salvage and Towing Company. According to the captain of the Pilots Association, the vessel was lost during salvage operations in rough seas, northeast of Buoy R"2", with no subsequent salvage or additional information.

See also the Addendum to the Descriptive Report

ITEM 3 - continued

3. Sanchez Salvage and Towing, New Bedford, MA, (617) 994-8018. After several attempts at phoning Sanchez, a personal visit was made with little or no conclusive results. Apparently all records during that time period were stolen.

4. U.S. Coast Guard Documentation Office, (401) 528-4342. Obtained vessel documentation and case number, 545574 and 5944328-74 respectively.

5. Point Judith Fisherman's Co-Op, Point Judith, RI. Obtained vessel owner name and phone number.

6. Mr. Mike Monteforte, (401) 364-6731.

Mr. Monteforte was the owner of the 60-foot F/V SHEARWATER. Mr. Monteforte was contacted several times by phone. He verified the Northeast Pilot Captain's story concerning the attempted salvage operation and present position of the SHEARWATER (NE of Buoy R"2") after salvage failure. Mr. Monteforte also indicated that post salvage diver investigation revealed that the vessel had broken up during attempted salvage operation. Subsequent salvage was not performed due to deterioration of the vessel from first attempt. No definite position of the wreck could be obtained from Mr. Monteforte.

With the aforementioned information, side scan operations began on 29 July 1982 (JD210) and continued through 3 August (JD215), at 100 meter line spacing with a range scale setting of 100 meters. Several lines were run in the vicinity of R"2" Buoy (reported position of wreck). Side scan profiles indicated a hard rocky bottom. Side scan search continued at 100 meter line spacing for the entire one nautical mile radius about the charted position, obtaining 100% bottom coverage. Several items were abstracted and compared with the prior survey. On 13 August 1982, diver investigation was accomplished on the two most prominent objects. Investigations revealed two rock boulders, the first of which was located in sandy bottom surroundings at 41° 18' 50.914" N, 71° 28' 19.474" W, with reduced least depth of 48.5 feet in surrounding 59 feet of water. The second boulder (in similar surroundings) was located at 41° 17' 45.094" N, 71° 27' 50.306" W, with a reduced least depth of 52.0 feet in surrounding 67 feet of water.

CHARTING RECOMMENDATIONS: It is the belief of this command that the charted position of the F/V SHEARWATER is inaccurate. All information indicates that the vessel during salvage attempt was moved and lost northeast of Buoy R"2". Due to lack of conclusive data (vessel position), it is recommended that the wreck symbol remain with PD attached. Delete the 10-foot sounding from symbol. As previously stated, items of significance (boulders) were diver investigated and results should be charted. See the Addendum - section 7.c.

See also the Addendum to the Descriptive Report

ITEM 4 (AWOIS # 1813)

(69-foot Steel Tugboat, BARATARIA, sunk in 1950 at 41° 10' 0" N, 72° 26.0" W, in approximately 126 feet of water)

The entire one-mile radius circle investigation was conducted, using side scan sonar search from 16 September 1982 (JD258) to 21 September 1982 (JD264). Bottom coverage was accomplished by 175 meter line spacing with a range scale setting of 200 meters while following arcs R1 (Falkner Island Lighthouse) and R2 (Saybrook Lighthouse). Two contacts were located during the search; first contact located at 41° 10' 29.519" N, 72° 25' 34.398" W, in 136 feet of water, protrudes 8.04 feet off the bottom. The second contact rests in 131 feet of water at 41° 09' 19.521" N, 72° 25' 04.088" W and protrudes 9.51 feet off the bottom. Positions and depths are based on side scan data calculations.

It is believed that one of the two contacts located during this item investigation is the tug THAMES, which was not found during the Item 5 search. It is not possible to tell which contact is the THAMES and which is the BARATARIA by looking at side scan records. Pre-survey positional and depth data would indicate that the BARATARIA is the contact located at Latitude 41° 10' 29.519" N, 72° 25' 34.398" W, in 136 feet of water. This wreck should be charted as a non-dangerous wreck due to the deep depth of the water surrounding it. Also, side scan sonargrams indicated that the wreck is laying on the bottom horizontally, not sticking into the bottom in a bow or stern first attitude.

The remaining contact would then be the THAMES, located at Latitude 41° 09' 19.251" N, Longitude 72° 25' 04.088" W.

CHARTING RECOMMENDATIONS: Remove the present symbol from the chart. Chart the first contact as a non-dangerous wreck at Latitude 41° 10' 29.519" N, Longitude 72° 25' 34.398" W. - See the Addendum - section 7.d. & e. Do not concur

Chart the second contact as a non-dangerous wreck at Latitude 41° 09' 19.251" N, Longitude 72° 25' 04.088" W.

ITEM 5 (AWOIS # 1814)

(55-foot Iron Tugboat, THAMES, sunk in 1973 at approximated position 41° 10.0' N, 72° 28.0' W, in 100 feet of water)

The area was side scan sonar investigated from 15 September 1982 (JD258) to 16 September 1982 (JD259) at one mile radius about the reported position. Bottom coverage was accomplished by 175 meter line spacing with range scale setting of 200 meters, while following similar grid coverage (arcs) as mentioned in Item #4. Bottom coverage obtained revealed no evidence of the 55-foot tugboat. Investigated area is south of Six Mile Reef, Long Island Sound, and contains irregular bottom with numerous ridges and peaks.

CHARTING RECOMMENDATION: Remove the dangerous wreck symbol, PA, from the chart. - See the Addendum - section 7.d. & e.

See also the Addendum to the Descriptive Report.

ITEM 6 (AWOIS # 1818)

(260-foot Coal Barge sunk in 1958 at 41° 10' 36" N, 72° 31' 39" W, in 95 feet of water)

Side scan operations began 13 September 1982 (JD256) with immediate contact of the item. Unsuccessful dive and ship wire drag attempts were made on 17 September 1982 (JD260) and 21 September (JD264) respectively. On 18 October (JD291) launch drag operations cleared the item in both directions to an effective depth of 56 feet.

CHARTING RECOMMENDATIONS: Recommend retention of the charted wreck symbol, at position computed by the ship, 41° 10' 47.598" N, 72° 31' 39.033" W, with effective clearance depth of 56 feet. – Concur – See also the Addendum – section 7.f.

ITEM 7 (AWOIS # 1807)

(Wooden Drydock sunk in 1975 in 90 feet of water at position 41° 09' 17.5" N, 72° 44' 58.5" W)

The Dive Report in ~~Section~~ Appendix F, page 35 of this report shows the only diving on this item was on the 20th.

Side scan operations began 16 August 1982 (JD228) with immediate contact of the item. Concurrent side scan and diving operations were conducted on 18 August 1982 (JD230); attempted least depth was not obtained due to poor visibility. On 20 August 1982 (JD232), drag operations began to clear item for least depth. Item was hung at effective depth of 49 feet. Drag operations continued on 20 August 1982 (JD232) and 24 August 1982 (JD236). Item was cleared in one direction to effective depth of 43 feet. Two additional drags were conducted on 10 September 1982 (JD253); item was cleared to effective depth of 45.5 feet.

CHARTING RECOMMENDATIONS: Recommend retention of charted wreck symbol at position computed by ship, 41° 09' 21.98 N, 72° 44' 58.01 W, with effective clearance depth of ~~45.5~~ 42 feet. – See the Addendum – section 7.g.

ITEM 8 (AWOIS # 1827)

(20-foot Cabin Cruiser sunk in 1966 at 41° 12' 20" N, 72° 54' 30" W)

The entire area was side scan sonar investigated. Operations began on 25 August 1982 (JD237) and were concluded 10 September 1982 (JD253). 400% bottom coverage was obtained by 75 meter line spacing with range scale setting of 100 meters while steering arcs R1 (New Haven Lighthouse Old) and R2 (Falkner Island Lighthouse). One contact was located north of the search area on 9 September 1982 (JD252). Diver investigation revealed a steel "I" beam at position 41° 13' 22.175" N, 72° 53' 37.334" W. Reduced least depth of 25.0 feet in surrounding 26.5 feet of water was obtained on the contact. The "I" beam is lying flat on the bottom in a stable position.

CHARTING RECOMMENDATIONS: Recommend deletion of wreck symbol from chart. The "I" beam should be charted as an obstruction cleared by divers to a depth of 25.0 feet. – Concur See the Addendum – section 7.h.

Do not concur.

See also the Addendum to the Descriptive Report.

ITEM 9 (AWOIS # 1766)

(Schooner Wreck at 41° 00' 38" N, 72° 58' 18" W)

Side scan operations began 23 September 1982 (JD266) with immediate contact of the item. Additional side scan operations were conducted on 24 September (JD267) and 28 September (JD271), obtaining 100% bottom coverage throughout the 1 NM radius circle. Diver investigation on 28 September (JD271) revealed that the item is very deteriorated with rib sections protruding from main body of wreck. Diver investigation could not obtain a definitive least depth due to poor visibility. Launch drag operations were conducted on 1 October (JD274), clearing the item to an effective depth of 64 feet.

CHARTING RECOMMENDATIONS: Recommend retention of the charted wreck symbol at position computed by ship, 41° 00' 39.74" N, 72° 58' 23.47" W, with effective clearance depth of 64 feet. Note that this position is NW of the presently charted position. - See the Addendum - section 7. i.

ITEM 10 (AWOIS # 1779)

(Wreckage at 41° 05' 00" N, 73° 16' 17" W)

Side scan operations began on 29 September 1982 (JD272) and were concluded on 4 October (JD277). 400% bottom coverage was accomplished by 75 meter line spacing with a range scale setting of 100 meters, while following arcs R_1 (Stratford Point Lighthouse) and R_2 (Old Field Point Light). Three contacts were abstracted from side scan sonargram records and cleared by launch drag operations conducted on 5 October 1982 (JD278). The first two contacts at 41° 05' 05" N, 73° 16' 12" W and 41° 05' 03" N, 73° 16' 08" W, were cleared to an effective depth of 47 feet. The third contact at 41° 04' 43" N, 73° 16' 13" W, was cleared to an effective depth of 48 feet.

CHARTING RECOMMENDATION: Recommend charting the three contacts as obstructions, at above positions with respective clearance depths. - See the Addendum - section 7. j.

ITEM 11 (AWOIS # 1769)

(39.7-foot Shoal Sounding at 41° 02' 36" N, 73° 03' 48" W)

On 30 September 1982 (JD273), side scan sonar (and fathogram search) operations began. Bottom coverage was accomplished by 200 meter line spacing with a range scale setting of 200 meters. Fathogram and side scan records show no evidence or indication of this or any other shoal sounding in the area. Comparisons with prior survey H-8967, WH-20-3-67, indicates general agreement of +3 feet. Ship's soundings were reduced for predicted tides and have not been corrected for velocity of sound through the water.

CHARTING RECOMMENDATION: Recommend deletion of charted obstruction at 41° 02' 34" N, 73° 03' 49" W. No further investigation is required. - Do not concur. See the Addendum - Section 7. K.

See also the Addendum to the Descriptive Report.

B. NORTHVILLE OIL TERMINAL:

Wire drag operations began 12 October, 1982 and were concluded 10 November, 1982. Approximately 40% of the proposed survey area has been completed. Inshore portions, from the offshore oil terminal north to the 41° 04' 26" N Latitude have been adequately covered by ship and launch drags.

This area is clear of any obstructions or wrecks. Ship and launch work was conducted in compliance with Project Instructions whenever possible. Inshore (vicinity of platform) launch work required many upright changes during drag operations to obtain maximum clearance depths. Several groundings were experienced by the ship during drag operations. All of these groundings were anticipated and later covered with additional drags. No unusual groundings or snags were encountered; in fact, the charted soundings adequately represent the area.

Two shoal areas (situated at east and southwest approach limits) are believed to be the limiting factors for the safe navigation of deep-draft vessels in this area. Docking and undocking during adverse weather and/or current conditions could be extremely difficult, as witnessed by ship's personnel when a departing tanker lost main engines temporarily.

RECOMMENDATIONS: Chart area as per ship and launch wire drag investigation (see A & D sheet for clearance depths). Area clear of obstructions and wrecks. Consideration should be given to additional tug during undocking operations (Coast Pilot 2 page 189).— See the Addendum - section 7.C.

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
NOAA SHIPS RUDE & HECK
439 West York St.
Norfolk, VA 23510

January 25, 1982

To: Chief, Nautical Charting Division
ATTN: N/CG241

Thru: Director, Atlantic Marine Center RHH
ATTN: N/MOA

From: LCDR Russell C. Arnold
Commanding Officer

Subj: Summary of Results, Northville Offshore Oil Terminal Survey, OPR-B660-RU/HE-82, CHANGE NO. 2

The NOAA Ships RUDE and HECK conducted wire drag operations in the vicinity of the Northville Offshore Oil Terminal from mid-October to mid-November, 1982, per Hydrographic Project Instructions OPR-B660-RU/HE-82, CHANGE NO. 2, dated September 22, 1982. Effective clearance depths obtained from these operations are depicted on the enclosed Area and Depth (A&D) diagrams. Standard wire drag methods were employed during this survey, with the ships being used for all work except in the immediate area of the platform itself, where launches were used. The 1:5000 scale A&D sheet portrays the junction for ship and launch work.

The ships found this area to be a difficult one to wire drag, particularly near the platform. Strong currents were encountered which basically set to the east on the ebb and west on the flood. All east or west drags were attempted running with the current. Drags run in directions other than east or west were attempted only at slack water, which usually proved to be of short duration. The 7-foot tidal range in the area proved bothersome, especially when the ships were trying to drag within 3-feet of the bottom. On rising tides, correctors changed rapidly, which in turn dictated the use of numerous short drags rather than a few large drags to cover the same area. The relatively shoal water on the east side of drag area also caused problems. It is standard procedure to drag from deep water toward shoaler water; thus, most of the drags had to be run from the deeper water on the west side with the ebb current toward the shoal water on the east side, where they usually grounded out. The net effect of the current, tide, and shoal was that most of the wire dragging had to be either at slack water or on an ebb current, thus cutting the available drag time by about 40 per cent.

Due in part to the above reasons, coupled with the windy weather that prevails during October and November on Long Island Sound, and the ever-present lobster pot floats that were encountered, this project was not completed. No drag attempts were made on the offshore NE to SW portion of the approach. Although this stretch represents approximately 60% of the area to be dragged according to project instructions, it could be accomplished quickly because

it is open area with no surrounding shoals to constrict operations. It also runs along the approximate axis of the current rather than being perpendicular to it as the inshore work area was, which would maximize the effectiveness of each drag.

Effective depths obtained during this survey were not in strict compliance with project instructions, which called for 70 feet or to within 3 feet of the bottom. Areas noted in red on the 1:20000 scale A&D sheet are representative of areas where 70-foot effective depths were not obtained, but probably could have been obtained had there been time to rerun those drags under more favorable tide/current situations. Areas labeled in blue on the 1:5000 scale A&D sheet are representative of areas where drags were not within 3 feet of the bottom. Again, additional time and effort would probably yield deeper effective depths in these areas. The blue area labeled #1 was dragged through by the strip labeled JD-307-01 and found to be free of obstructions. However, as the end buoy was aground during this portion of the drag, no effective depth could be assigned to this area. A subsequent drag, JD-312-01, was run through this area except for the small wedge, labeled 55", which was part of the drag JD-308-01. The final effective depth assigned to this area will probably be 59 feet. Again, no obstruction exists here. All effective depths are reduced for predicted tides.

The ships were furnished copies of surveys conducted by Ocean Surveys, Inc. (OSI) (enclosed). These surveys proved to be extremely useful in helping the ships determine proper upright settings to be used for each drag. They also proved to be accurate, especially in portraying the 60-foot curve that surrounds the terminal. The drag labeled JD-307-01 is a good verification of this fact, because the east side of this drag was set at the OSI depth and dragged along the bottom just as it should have. The OSI survey shows that the terminal face has a 252°/072° orientation in lieu of the 270°/090° presently charted. The RUDE & HECK verified that this orientation, in addition to OSI's portrayal of the size and shape of the terminal's components, is correct. The terminal is presently being used by tankers 700-800 feet long, which is the distance between the outer mooring structures where the stern and bow lines are secured. These tankers are brought into the terminal with the assistance of two tugs. It should be noted that tankers of this size are also moored on the south side of the terminal. Tankers usually depart the terminal with the assistance of only one tug. Tankers often dock at the terminal light, take on cargo, and deliver it to Port Jefferson, New York, or New Haven, Connecticut.

Recommendations

1. Additional work may be required in area immediately to the west of the terminal to get rid of effective depths that are in the high 50's. This decision should be based upon what draft of vessel is intended for the terminal. By centering the enclosed scale model of the Very Large Crude Carrier (V.L.C.C.) alongside the terminal on the 1:2500 scale OSI survey, it is apparent that the maximum amount of water available at the stern, starboard

(south) side, is 62 feet. There are also 62-63 foot soundings along the final approach to the terminal (circled in red on the OSI 1:5000 scale survey). Based upon these facts, it is recommended that a 62-foot draft be considered the absolute maximum that the facility can handle.

2. Northville Industries officials indicated that V.L.C.C.'s would be brought into the facility at high water only. As the tide itself would be the only safety factor/additional depth available for a V.L.C.C. drawing 62 feet, it is recommended that high tide be considered a condition that must be met for docking (or undocking if loaded). Note that the minimum predicted high tide available at the terminal during 1982 was 4 feet.

3. It is recommended that consideration be given to establishing navigational aids that would assist V.L.C.C.'s in making their final approach to the terminal. A fixed range could be established to indicate the final approach trackline to the terminal. The front of such a range could be a light/marker on some portion of the terminal itself, with the rear of the range being on the beach in the vicinity of Luce Landing. Floating aids would also be a possibility for marking the final approach, with a minimum of 2 buoys on either side of the trackline. A third alternative would be to use precise short range radar navigation equipment similar to that used by the RUDE and HECK during this survey. Such systems have been proven effective by pilots in the Netherlands for example.

4. Consideration might be given to establishing wind and visibility parameters that would dictate whether arrivals or departures of V.L.C.C.'s were even attempted.

Conclusion

The RUDE and HECK encountered no obstructions while conducting these wire drag operations. The enclosed A&D sheets accurately depict the areas covered by wire drag and the effective depths obtained. Sufficient unobstructed water exists along the recommended approach trackline at high tide and alongside the terminal to accommodate V.L.C.C.'s with a length of 1100 feet and draft of 62 feet.

NOAA FORM 77-28 (11-72) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | REGISTER NO.

HYDROGRAPHIC TITLE SHEET

FE-241WD

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

FIELD NO. R/H 05-01-83/84
R/H 05-03-83 *
R/H 10-02-83

State: New York -- Massachusetts - Connecticut -- Rhode Island

General locality: ~~Long Island Sound~~ Long Island Sound & Rhode Island Sound

Locality: ~~Offshore Jacobs Point, Vicinity of Northville Oil Terminal~~

Scale: 1:5000 & 1:10,000 Date of survey: 28 JULY 83 - 16 JUNE 84

Instructions dated: 22 JULY 83 & 12 APRIL 84 Project No.: OPR-B660-RU/HE-83
OPR-B660-RU/HE-84

Vessel: NOAA Ships RUDE(9040), HECK(9140), and Launch 25(1290), Launch 20(1291)

Chief of party: LCDR Robert K. Norris

Surveyed by: LCDR D.D. Winter, LCDR R.K. Norris, LT N.G. Millett, LT E.M. Clatk, ENS T.G. Callahan

Soundings taken by echo sounder, ~~hand lead, pole~~: Raytheon DE-719B & DE-719C, Wire Drag

Graphic record scaled by: T.G.C., N.G.M., G.L.A.

Graphic record checked by: D.D.W., R.K.N., E.M.C.

Protracted by: N/A Automated plot by: N/A

Verification by: N/A

Soundings in ~~fathoms~~ feet at ~~MLW~~ MLLW ~~for predicted tides.~~

REMARKS: All times recorded in UTC. This report covers field work performed in 1983, under project instructions for OPR-B660-RU/HE-83, and in 1984, under project instructions for OPR-B660-RU/HE-84. Field sheet R/H 05-01-83/84 is the only sheet of this survey containing work done in 1983 and 1984.

* This entire survey (FE-241WD) is registered under the Field No. R/H-20-2-82.

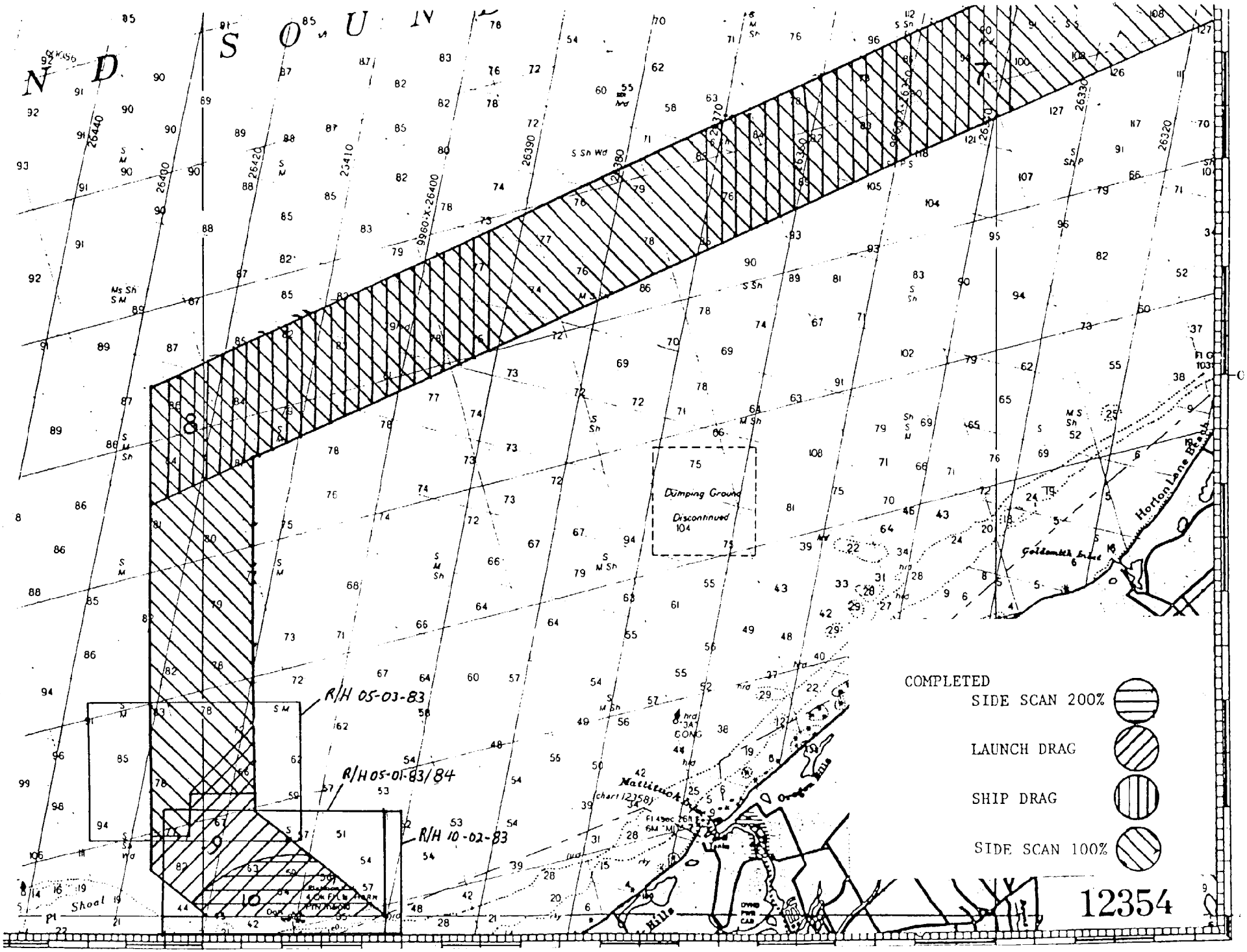
R/H 05-03-83
R/H 05-01-83/84
R/H 10-02-83
Dumping Ground
Discontinued
104
Horton Lane Beach
Matlitwa Point
(chart 12258)
COMPLETED
SIDE SCAN 200%
LAUNCH DRAG
SHIP DRAG
SIDE SCAN 100%
12354

TABLE OF CONTENTS

* = Data removed from the Descriptive Report and filed with the field Records.

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY ~~H~~ FE-241WD
R/H 05-01-83/84, R/H 05-03-83, R/H 10-02-83
1:5,000 AND 1:10,000 SCALE
1983 & 1984
NOAA SHIPS RUDE & HECK
LCDR ROBERT K. NORRIS, COMDG.

A. Project Authority

This project was conducted in accordance with two sets of Hydrographic Project Instructions. The orisinal project instructions were OPR-B660-RU/HE-83, Southern New Ensland Coast, dated 17 June 1983. There were two changes to these orisinal project instructions, Change No. 1 dated 22 July, 1983 and Change No. 2 dated 8 December, 1983. The second set of project instructions were OPR-B660-RU/HE-84, Southern New Ensland Coast, and were dated 12 April, 1984. Change No. 1 dated 21 May, 1984 was the only change to these project instructions. These 1984 project instructions were a continuation of the work outlined in the 1983 project instructions. The purpose of this project was to verify or disprove certain reported submersed wrecks along the south coast of New England, to provide clearance depths over selected wreck sites, and to provide wire-drag clearance of the Northville Industries Corporation oil tanker route.

B. Characteristics and Limits of Area Surveyed

This report contains (Also part of FE-241WD) that area of the one mile wide tanker route from the Northville Oil Terminal face to the junction with H-10075WD (1982). The survey work involved launch drags in the area described and side scan sonar coverage of that area within 1/2 mile of the terminal face and bounded by the corridor. The survey area included corridor points 9 and 10.

C. Survey Vessels

Launch drag operations were performed with the respective launches of the NOAA Ships RUDE(9040) and HECK(9140), Launch 25 (1290) and Launch 20 (1291). The side scan sonar work was accomplished with both the RUDE and the HECK utilized as towing vessels.

D. Hydrographic Sheets

The hydrographic sheets used in this survey were made of mylar and were constructed with the Digital PDP 11/34 computer and Houston Instruments roll-bed plotter.

Field sheets R/H 05-01-83/84 and R/H 05-03-83 were plotted at a scale of 1:5000 and contain all the launch drag work done during this project. Field sheet R/H 05-02-83 was a larger version of R/H 05-01-83 and was not used during this survey.

Field sheet R/H 10-02-83 was plotted at a scale of

1:10,000 and contains the two-hundred-percent side scan coverage of the area within 1/2 mile radius of the terminal face.

A slight discrepancy occurred in the notation of the latitude and longitude of the grids as plotted by the computer during 1983. The value of seconds of degree of arc were sometimes printed one unit less than the actual value for the respective line. Lines of latitude and longitude were plotted at intervals of 30 seconds at a scale of 1:10,000 and at intervals of 15 seconds at a scale of 1:5000. This made any discrepancy obviously apparent. As an example, the plotter printed 72-10-29, instead of 72-10-30, adjacent to the 72-10-30 longitude line. All latitude and longitude lines are plotted with the correct values, even though the labeled are incorrect. This problem was caused by a software truncation error that could not be corrected out in the field. This problem was rectified during the winter inport period following the 1983 field season and therefore this notation error does not appear on the sheets constructed during 1984.

E. Equipment and Techniques

The launch drags were performed utilizing standard constant tension drag equipment and techniques. The drags were towed from the ships' Boston Whaler skiffs and were tested often. The uprights were changed quickly in the areas of rapidly changing depth which made frequent testing a necessity during this survey.

All side scan sonar coverage was accomplished with the Klein systems provided by AMC. These systems consisted of a Model 521 recorder, a 100 KHz towfish, a K-Wing depressor and a towcable. The Model 521 recorder used aboard the HECK, S/N 223, had initial and maximum gain controls with numerical settings. This allowed for the annotation of the sonargram with a value for the initial and maximum gain settings at the start of the day and annotating any change in settings that occurred during the day. The recorder aboard the RUDE, S/N 088, did not have numerical settings on the gain control knobs. The sonargrams from this recorder were only annotated with the relative changes that were made to the gain settings during the day's operation.

The recorder 088 also did not have as many paper take-up rollers as did recorder 223. This caused the sonargram record produced by recorder 088 to contain numerous paper pull stretch marks. These stretch marks appeared as diagonal traces from the outer edge of the paper towards the center, as the paper came off the helix drum. All the sonargrams from this recorder were annotated as to this fact to avoid confusing these stretch marks with sand waves.

Del Norte rates obtained on fixes were recorded with Eaton Model 7000+ serial printers during this survey. These printers worked fairly well considering the fact that they were not designed to be operated in a marine environment. The printers would often type out a line of meaningless characters or rates from the previous fix before the current fix was recorded. The printer records were annotated such that these meaningless characters and extraneous rates were lined out leaving the correct fix rates clearly displayed.

Only two Eaton printers were supplied to the RUDE and HECK for this survey. This did not provide the ships with any spare printers or allow for three vessels to survey with printers at the same time. Printer break-downs did occur and there were days when the launches were using the printers during drag operations while ship side scan operations were also being carried out. Therefore there were a few instances when the Del Norte rates for a vessel were recorded from the DMU in the appropriate volume with no accompanying printer record.

A Raytheon model DE-719B echo sounder was operated and annotated concurrently during all sonar and launch drag operations. The only exception to this occurred on JD's 163 and 164 of 1984 when a Raytheon DE-719C echo sounder was utilized. The echo sounder recordings were reviewed daily to ensure that no large objects located directly under the sonar towfish may have gone undetected during side scan sonar operations. The echo sounders were also used by during launch drags to assist launch OIC's in determining upright settings. The depth of the transducer was 7.0 feet for the ships and 2.0 feet for the launches.

Althoush it is not anticipated that these soundins records will be used for chartins purposes, the settlement and squat data for the RUDE and HECK obtained in Norfolk Harbor on 25 January 1983, is included in this report. No velocity corrections or settlement and squat determinations were actually conducted within or during this project.

Diving operations were conducted in accordance with NOAA Directives, AMC Directives, Project Instructions and established RUDE and HECK procedures. Visibility during the survey was rarely more than 5 feet. Strong currents also hampered divins.

F. Control Stations

Two electronic control stations were used for this section of the survey. Station 01 was HORTON POINT LIGHT, (1939), at latitude 41-05-07.028N and longitude 072-26-45.981W with an elevation of 31.0m. Station 02 was TANK 8, (1982), located at latitude 40-58-47.362N and longitude 072-38-49.172W with an elevation of 55.0m. Station HORTON POINT LIGHT was located by NGS and station TANK 8 was established by resection by ships' personnel in 1982 and is documented in H-10075WD. All stations are of Third-order, Class I control accuracy or better. The station positions are based upon the North American Datum of 1927. The Horizontal Control for this survey has not been verified.

G. Calibration and Position Control

Vessel positioning for all work was accomplished with the Del Norte 520 series electronic positioning equipment operated at a frequency of 9400 MHz in the range-range mode. A listing of DMU and master units used by the vessels during this survey are listed by Julian day in Appendix A and Supplemental Appendix A.

The remote units installed during the 1983 field work were Remote 72, S/N 2897 at Station 01 and Remote 78, S/N 2986 at Station 02. The remote units installed during the 1984 field work

were Remote 74, S/N 3003 at Station 01 and Remote 78, S/N 2986 at Station 02.

Five baseline calibrations were performed during this survey. All baseline calibrations were conducted in the immediate work area and entirely over water in accordance with AMC OPORDER 79. The baseline distances were determined by the HP 3800A electronic distance measuring instrument, S/N 0987A00157. The end points of the baseline distances measured by the HP 3800A were identified or marked as described below.

The baseline distance measured across Port Jefferson Harbor ran from the NGS disk on PORT JEFFERSON WEST BREAKWATER LIGHT(NEW)(1951) to the wooden bulkhead at Belle Terre Beach. The position on this bulkhead was marked by a triangle etched on the deck of the bulkhead.

The baseline distance measured across the Thames River from Groton to New London, CT ran from a rock on the S. Groton Jetty, marked with an X chiseled on its face, to a position in front of a piling on Pier 4S of the NUSC facility, New London, CT.

The following is a list of the dates, locations, and distances of the baseline calibrations performed during this survey:

27 July, 1983	Belle Terre Beach to Port Jefferson W. Jetty Lt.	2601.1m
27 August, 1983	Belle Terre Beach to Port Jefferson W. Jetty Lt.	2601.1m
30 October, 1983	Pier 4S, NUSC, New London, CT to S. Groton Jetty	2312.0m
09 June, 1984	Belle Terre Beach to Port Jefferson W. Jetty Lt.	2601.1m
16 June, 1984	Belle Terre Beach to Port Jefferson W. Jetty Lt.	2601.1m

Daily calibrations were carried out using the fixed point calibration method. The NORTHVILLE E. DOLPHIN(1982) was the fixed point used in this survey. The position of the dolphin was determined by traverse methods by ships' personnel in 1982, during H-10075WD.

The launches calibrated by pulling alongside the dolphin with the Del Norte antenna closest to the dolphin. No offsets were applied and rates were recorded on the Eaton printers or simply read off the DMU display.

The ships calibrated by pulling as close alongside the dolphin as was safely possible and rates were again recorded on the Eaton printers or read off the DMU display. Offsets were applied to these rates taking into consideration the position of the ship's antenna relative to the E. Dolphin and the shore stations.

The daily correctors for all calibrations were stable and within accuracy tolerances for a survey of this scale. Therefore

only the baseline calibration data should be applied to the raw position data during final processing. See Appendix A and Supplemental Appendix A for baseline calibration data.

H. Dates of Survey

This survey was begun on 28 July, 1983 and was completed on 16 June, 1984.

I. Reduction and Processing of Data

Data collected during launch drag operations was manually entered in the wire drag volumes while on line. The position data was then entered in the Digital PDP 11/34 computer off line. The programs used were the R/H Double Precision Wire Drag programs. The drag strips were then smooth plotted with the Houston Instruments roll-bed plotter. Effective depths from reduced data were then drawn on the drag strips in colored pencil, each strip being done in the same color. Each day's strips were applied to the A&D sheet of the area in that day's color.

The drag strips from the 1984 field work were not applied to the A&D sheet in order to keep this A&D sheet as simple as possible. The 1984 drags were only clearing strips over a hang that occurred outside the limits of the Northville Corridor during 1983. This hang had remained uninvestigated from the 1983 field work and was cleared in 1984 to within three feet of the bottom in two, opposite directions . This hang and the clearing strips are throughly discussed in Section D of this report.

Test data was applied to the drags in a manner which differs slightly from the Wire-Drag Manual. This method has been used for the last several years aboard the drag boats and is a more conservative method. When an upright was lowered the deeper drag depth was not claimed until the time of the first test at that depth. When an upright was raised the drag depth from the first test after the raising of the upright was applied to the time when the upright was raised. If the amount of lift increased during a drag when uprights remained unchanged, this decreased drag depth was applied back to a time halfway between the time of the earlier test with less lift and the time of the later test with the greater lift.

Predicted tide correctors were then applied to the drag depths obtained. These predicted tide correctors were generated onboard with the ship's Digital PDP 11/34 computer and predicted tide tapes for 1983 and 1984. These tide tapes were supplied to the ships by MOA231. Hardcopy printouts of the predicted tide correctors used during this survey are included in the data file.

The changes in effective depth that occurred during a drag were applied at the exact time of change. Fix interval for the launch drag work was two minutes, therefore some changes in effective depth occurred on the minute between fixes. When this occurred the time was interpolated and drawn in appropriately.

All side scan sonar data was initially recorded in NOAA Form 77-44, Sounding Volumes. All header data, position numbers, time, and position control data were recorded in the appropriate columns in the volumes. The remarks column was used to record all

line information, vessel rpms, length of tow cable, measured from waterline to towfish, vessel headings, and any other unusual or noteworthy remarks. The towfish layback was computed by adding the amount of tow cable out the stern plus the stern to antenna distance.

Position data from the side scan sonar work was entered in the Disital PDP 11/34 computer with a modified version of the R/H Double Precision Wire-Drag program. Rates for just one vessel were entered in this program and a single vessel position plot was then generated with the Houston Instruments roll-bed plotter. All side scan sonar work for this survey was plotted in this manner.

Side scan sonar coverage was computed and listed on the Side Scan Sonar Coverage Abstract. The required 200% side scan coverage was obtained within one half nautical mile of the terminal face, with the exception of the areas with depths of thirty feet, located to the southeast and southwest of the terminal face.

In these two areas, over the shoals, the lack of sufficient depth for side scan precluded two hundred percent coverage. Only 100% coverage was obtained and was considered sufficient since the survey was for a deep draft (64 foot) corridor.

The sonargrams from the side scan sonar work were examined while on line and then again at the end of the day. All notable contacts were flagged during each examination. These flagged contacts were then logged in the Side Scan Sonar Target Abstract for that field sheet. The Target Abstract was then completed and the contacts were plotted on the smooth sheet containing the vessel position plots. The towfish layback was computed by adding the amount of towcable out the stern plus the stern to antenna distance(21.3m). The layback and range to target values from this list were the distances used to plot the contact positions. All values of towcable length on the sonargram and in the sounding volumes refer only to the amount of cable out the stern. The Side Scan Sonar Target Lists were then compiled from the Target Abstracts and the contact plots. The Del Norte rates of the contact positions were determined using a grid and arc overlay. These rates were then used to determine the latitude and longitude of the contact with the HP 9815 computer and the Geodetic Package program.

Wire Drag volumes 8R and 8H were not used and not included in these records. The Wire Drag volumes for the 1984 field work were numbered 1R and 1H. The numbering of the volumes for the 1983 field work started with 1R and 1H therefore this survey contains two volumes numbered 1R and 1H.

Effective depth(ED) strip diagrams drawn at the end of each work day used time as the reference through JD 241. On JD 242 the ED strip reference was changed to fix number, rather than time, since the PDP 11/34 computer plot uses fix number as the reference. Fix numbers were used as the reference through the remainder of the survey.

J. Junctions and Splits

Now FE-2411WD

All Junctions in this survey were with the launch drags from this project and the ship drags from H-10075(1982). Overlap at these Junctions was 120m or more in all cases.

There were no splits or areas of insufficient overlap contained in this survey. - Not Verified

K. Comparison with Prior Survey

Effective depths from the launch drag coverage were compared with prior survey H-9088(1969). This comparison was made using the chartlet of H-9088(1969) which was included in the project instructions. This chartlet was enlarged to a scale of 1:5000 and included with this survey. The A&D sheets of the area were plotted at 1:5000 and overlaid on this chartlet with direct comparisons made. There was a slight distortion in projection on the enlarged chartlet. This distortion caused some problems when comparing the chartlet with the A&D sheet.

There were small areas where the cleared effective depth exceeded the depth according to the prior survey. These small areas occurred in the vicinity of the following positions:

Latitude Longitude	Prior Survey Depth	Launch Drag Depth
41-00-05N 072-39-16W	65 feet	66 feet
41-00-13N 072-38-58W	64	65
41-00-00N 072-38-55W	58	60
41-01-42N 072-39-28W	71	72
40-59-56N 072-38-04W	31	34
41-00-18N 072-39-47W	72	73
41-00-20N 072-39-40W	69	71
41-00-20N 072-39-43W	70	71
41-00-21N 072-39-47W	71	72
41-00-22N 072-39-31W	66	69

41-00-22N 072-39-34W	67	69
41-00-22N 072-39-43W	69	70
41-00-23N 072-39-17W	62	63
41-00-23N 072-39-26W	65	67
41-00-26N 072-37-17W	62	63
41-00-26N 072-39-21W	63	65
41-00-26N 072-39-26W	64	65

In all these areas the effective depth exceeded the prior survey by only 1-3 feet. This difference can most likely be attributed to the rounding off of drag and sounding data, errors in sounding position due to prior survey enlargement, and the fact that the effective depths were computed using predicted tides. The application of smooth tides may correct any discrepancy.

Four small areas occurred where the effective depth did not meet the required clearing depth or come within three feet of the bottom, as per the project instructions. These areas fall along the edge of the corridor in regions where the bottom topography rises rapidly. Drags were run from deeper to shoaler water but the bottom rises faster than the uprights can be raised and tested. This situation causes the drag to either ground out or to be raised more than three feet off the bottom only to ground out later.The areas where this occurred are as follows:

1) In the extreme southwest side of the corridor along the 60 foot curve between 41-00-00N, 072-39-44W and 41-00-10N, 072-40-10W. The effective drag depths of 43 to 45 feet were achieved where previously surveyed depths indicate 50 to 60 feet.

2) The extreme southeast side along the 60 foot curve, between 41-00-00N, 072-38-20W and 41-00-03N, 072-38-04W, the bottom topography rises quickly from 50 to 30 feet.

3) The area just west of the terminal, along the 60 foot curve, in the vicinity of 41-00-00N, 072-39-03W. This area is similar to those listed above in that the bottom rises faster than the uprights can be raised and tested.

4) Along the eastern boundary of the corridor near the 60 foot curve, in the vicinity of 41-00-51N, 072-39-03W. This area was

cleared twice with the deepest effective depth being 57 feet and previously surveyed at 61 feet. This may be due to predicted tide correctors differing from the actual tide correctors. Additionally some slight shoaling may have developed in this area.

L. Comparison with Charts

The area surveyed is covered by two NOS charts, 12358 14th Ed., July 10, 1982 and 12354 25th Ed., July 31, 1982. The soundings in the survey area on these charts originate from prior survey H-9088(1969). The comparisons of soundings from the charts with the surveyed depths are therefore the same as the comparisons with the prior survey.

There is no shoreline within the limits of R/H 05-01-83/84, R/H 05-03-83, or R/H 10-02-83. All presently charted onshore landmarks in the proximity of this survey area were verified visually from offshore and are adequately charted.

The followins non-soundins features were positioned usins Del Norte and compared with NOS charts 12358 and 12354. Results of these comparisons indicate that the entire Northville Terminal, the moorins buoys, and the Jacobs Point Pier are not accurately depicted on the charts. As noted in the RUDE and HECK Descriptive Report for this area in 1982, OPR-B660-RU/HE-82, the charts indicate the terminal face has a 090° /270° orientation while the surveyed orientation was found to be 072° /252° . It should also be noted that the terminal consists of a larse platform with an additional smaller platform to the northeast and southwest. These smaller platforms function as moorins dolphins and are each marked by a privately maintained flashins light. The center platform is marked by four privately maintained lights and a horn, as charted.

On chart 12358, four moorins buoys are charted inshore, to the south, of the terminal. Those charted buoys should be deleted. Two moorins buoys were located durins 1983 and should be charted at 40-59-57.9N, 072-38-40.2W and 40-59-51.9N, 072-38-59.2W on chart 12358 and 12354.

The northern end of Jacobs Point Pier should be chansed and charted to reflect a 090°/270° oriented "T" head. The corners of the pier were located at 40-58-59.3N, 072-38-44.9W and 40-58-59.3N, 072-38-45.3W.

The two privately maintained buoys C"3" and C"5" were on station as charted.

No other chanses or additional landmarks or aids to navigation were noted durins this survey.

M. Adequacy of Survey

This survey completely covers the area described in section B. and is considered complete and adequate for chartins.

N. Incomplete Items

There are no incomplete items contained in this survey.

O. Hangs and Groundings

Three hangs at 64 feet occurred on JD 229 in the vicinity of latitude 41-01-20.0N, longitude 072-39-29.0W. These hangs were investigated by divers the same day and found to be old lobster pots. An additional hang at 63 feet was encountered on JD 231, fix 1246. This hang was assumed to be the lobster pot that was encountered on JD 229, fix 1177, since the positions varied by only 4 meters. On JD 262 a chain drag recovered four pots from the area and drags subsequently cleared the area to 65 and 66 feet, as indicated. The old pots were given to a local fisherman.

One hang at 66 feet was encountered on JD 252 at latitude 41-00-21.3N, longitude 072-39-27.0W. The hang occurred when one end weight was lowered into one of several pots. When the weight was brought up, three lobster pots with lines were brought up, recovered and again given to a local fisherman. The area was then cleared to 65 feet. In all instances, the obstructions, lobster pots, were recovered and the area cleared by a single directional drag.

During 1983 a hang occurred at 58 feet on JD 263, fix 2022, in the vicinity of latitude 41-00-04N, longitude 072-37-48W. This hang occurred outside the corridor in an area with numerous lobster pots. This hang was cleared in two, opposite directions to within three feet of the bottom by launch drag operations during 1984. Launch drag operations during 1984 cleared this hang to 58 feet on JD 163, Strip 01 in a northwest to southeast direction. The hang was cleared in the opposite direction, southeast to northwest, to a depth of 55 feet on JD 164 by Strip 02. These drags resolved this hang from 1983, resulting in a final cleared depth of 55 feet. This hang from 1983 was most likely caused by derelict lobster pots. These lobster pots had probably shifted or been removed after the 1983 survey work and before the 1984 survey work.

Groundings which occurred along the steep slope of the 60 foot curve near the terminal were expected and planned for. In areas of such a steep slope, the only method to adequately define the slope was to drag into the slope until the launch drag grounded out. After the grounding, the drag was reversed and the process repeated until the slope was sufficiently defined. This method produced a stair step type of slope definition.

P. Currents and Winds

Tidal currents were closely monitored during the course of this survey, since launch drag operations had to be run with the predominate current flow at depth to result in satisfactory lift data. Comparisons were made with the Tidal Current Tables, 1983, Atlantic Coast of North America for station 2681 and the Tidal Current Charts, Long Island Sound and Block Island Sound for station 96. In general, the times and strengths of maximum flood and ebb and times of slack water at the surface agreed with the predicted times and strengths under normal conditions. However, at depth the currents generally reversed and would flow in a contrary direction approximately one hour prior to the time

of surface slack water. This phenomenon was generally observed within one meter of the bottom during the flood and ebb. This condition was not anticipated by the launch operators initially and resulted in the rejection of some data as a result of unsatisfactory lifts. With experience, these bottom counter currents were compensated for by running the drags into the surface currents approximately one hour before slack. This generally resulted in acceptable drag data since the bottom current appeared to have the greatest effect on the drag.

Northerly and southerly winds appeared to have minimal effect on the tidal currents, probably attributable to the east-west orientation of the Long Island Sound basin. However, easterly and westerly winds brought about nontidal currents which considerably influenced the predicted tidal currents. Easterly winds appeared to prolong the flood on the surface but also resulted in the reversed bottom current appearing several hours earlier than under normal conditions. Prolonged periods of westerly winds would generally result in opposite conditions.

In general, the surface tidal currents as depicted in the Tidal Current Charts and the Tidal Current Tables were closely observed during the entire project and appear to be accurately described. However, the tidal currents at depth appear to flow contrary to the surface current commencing about one hour prior to slack. The masters of deep draft vessels approaching the Northville Terminal during anticipated slack water conditions will probably experience a well established current at depth.

Q. Personnel

The officers participating in this survey were LCDR Donald D. Winter, LCDR Robert K. Norris, LT Neal G. Millett, LT Edward M. Clark, and ENS Thomas G. Callahan.

R. General Notes

One general comment on the reliability and accuracy of the launch drag system should be made. The launch drag system, as used, was very accurate since both upright wires were continually observed. A tender, who nearly always had a hand on either the ground wire or the upright, was responsible for informing the OIC of any abnormalities or problems with the drag. This close monitoring, along with the small, thin fiber ground line and the low tension setting on the take-up reel, resulted in immediate indications of any obstructions. Items such as old lobster pot line, seaweed, and small rocks were found to hang the drag, even at the fastest drag velocities. Thus, had any obstructions been encountered, the the launch drag system would have hung on them; any areas cleared by the launch drag system are clear of any obstructions.

When checking the sonargrams taken near the terminal face, no significant contacts were observed. During the 1983 field season, Mr. J.R. Dudley, Director of Northville Terminal and Marine Operations, expressed the desire to obtain a draft field sheet with any side scan sonar contacts, even small contacts, plotted relative to the terminal face. After expressing

the desire, Mr. Dudley informed the Command that Northville Industries would have divers investigate and remove any and all contacts which could, or would, hazard tankers if they happened to settle into the bottom when unloading cargo at Northville Terminal. With that understanding, a draft field sheet labeled "Draft Copy - Not For Use In Navigation, Subject To Office Verification" was provided to Northville Industries.

Mr. J.R. Dudley was contacted by the Command on 31 August, 1984 to obtain the results of Northville Industries' diver investigations of these contacts. Mr. Dudley referred the Command to Mr. Arnold Golz, Marine Maintenance Supervisor, Northville Industries. Mr. Golz informed the Command that no diver investigations had been conducted at that time. Mr. Golz did state that Northville Industries was still planning to investigate the contacts found by the RUDE and HECK's side scan sonar operations in the vicinity of the terminal face.

The Command feels that the contacts found by side scan sonar operations on field sheet R/H 10-02-83 are minor and present no hazard to deep draft traffic. It should be noted that this entire area has been cleared by launch drag operations with all hangs fully discussed in Section C of this report. These contacts do not warrant any further investigation by NOS resources.

After briefing Mr. Dudley and other Northville Industries personnel at the end of the 1983 field season, the Command was thanked for conducting the survey. During the briefing, a general comment on the extent and size of the sand waves between points 7 and 8 was made. Mr. Dudley then asked if there was any information available, besides the Tidal Current Chart for Long Island Sound, on the velocity, direction, and duration of bottom currents in that area. The Command could not answer the question and referred Mr. Dudley to the Chief, Tides and Water Levels Branch. Should the information not be available from N/OMS12, it is recommended that an at depth tidal current survey of the entire corridor be conducted since currents at depth greatly affect a 64 foot draft tanker.

See the Coast Pilot Report and Loran-C comparisons for OPR-B660-RU/HE-83 and the Descriptive Report for OPR-B660-RU/HE-82 for additional information on this survey.

Unless both Klein sonar systems are completely overhauled and serviced, it is recommended that neither system be operated at the 400 meter range scale. In addition, at the 10 degree beam depression and the 40 degree vertical beam width, the towfish must be at least 40 meters off the bottom in order to achieve an effective scanning range of 400 meters. Therefore, even with a properly operating unit, the 400 meter range scale should not be attempted in depths less then 130 feet. There are no areas within R/H 10-02-83 with suitable depths for the 400 meter scale operation.

The format of this report is a composite of the Descriptive Report formats contained in the Wire Drag and Hydrographic Manuals. This format is the optimum composite of the pertinent sections of the two reports and is more applicable to the surveys currently being conducted by the NOAA Ships RUDE and HECK.

Respectively submitted,

Thomas G. Callahan

Thomas G. Callahan, ENS, NOAA

S. Approval Sheet

Field operations contributing to the accomplishment of this survey were conducted under my supervision with frequent personnal checks of progress and adequacy. This report and field sheets have been closely reviewed and are considered complete and adequate for charting.

Robert K. Norris

Robert K. Norris

LCDR., NOAA

Commanding Officer

NOAA Ships RUDE & HECK

C. HORIZONTAL CONTROL

No new stations were established for this survey. See Appendix D., Signal List for a complete listing of all stations used on this survey.

D. SIGNAL LIST

Not Verified

PROJECT:

B660-Ru/He-83

SIGNALS/STATIONS

Horton Point Lt.
Station 01

ID NBR	1
LAT	410587.928
LON	722645.981
ELEV'N	31.80 M
FILE	1

Tank 8
Station 02

ID NBR	2
LAT	405847.362
LON	723849.172
ELEV'N	55.00 M
FILE	2

Northville Oil
Terminal, E. Dolphin

ID NBR	3
LAT	410882.898
LON	723844.971
FILE	3

New Haven Lthse.
Old Tower

ID NBR	4
LAT	411455.931
LON	725415.238
ELEV'N	26.60 M
FILE	4

NOT USED

Falkner Is. Lt.

ID NBR	5
LAT	411242.701
LON	723914.608
ELEV'N	28.60 M
FILE	5

New Haven West Brkw.
West End Light

ID NBR	6
LAT	411331.939
LON	725723.754
FILE	6

NOT USED

New Haven Lt.

ID NBR	7
LAT	411315.430
LON	725633.422
FILE	7

New Haven Middle Brkw
East End Lt.

ID NBR	8
LAT	411352.659
LON	725524.882
FILE	8

New Haven Middle Brkw.
West End Lt.

ID NBR	9
LAT	411327.229
LON	725611.308
FILE	9

Southwest Ledge Lt.

ID NBR	10
LAT	411403.681
LON	725443.178
FILE	10

Saybrook Brkw Lthse.

ID NBR	11
LAT	411547.185
LON	722835.611
ELEV'N	17.70 M
FILE	11

Duck Is.
North Brkw Lt.

ID NBR	12
LAT	411536.441
LON	722831.536
FILE	12

Duck Is.
West Brkw Lt.

ID NBR	13
LAT	411522.266
LON	722908.296
FILE	13

Kelsey Point Brkw

ID NBR	14
LAT	411436.323
LON	723030.849
FILE	14

Appendix D Not Verified

Station Name	Latitude Longitude	Source	Type
Old Field Point Lighthouse	40°58'36.708" N 073°07'08.615" W	NGS-Monumented	Visual
Old Field Point Beacon	40°58'36.858" N 073°07'08.415" W	NGS-Monumented	Visual/ Electronic
Port Jefferson West Brkw. Light	40°58'13.128" N 073°05'37.328" W	NGS-Monumented	Visual
Port Jefferson East Brkw. Light	40°58'19.909" N 073°05'31.345" W	NGS-Monumented	Visual
Stratford Shoals Lighthouse	41°03'35.368" N 073°06'06.214" W	NGS-Monumented	Electronic
Pecks Ledge Lighthouse	41°04'38.047" N 073°22'12.864" W	NGS-Monumented	Visual
Penfield Reef Lighthouse	41°07'01.064" N 073°13'21.122" W	NGS-Monumented	Visual
Horton Point Light Tower	41°05'07.028" N 072°26'45.981" W	NGS-Monumented	Electronic
Buzzards Bay Light Tower	41°23'47.128" N 071°02'02.492" W	NGS-Monumented	Circle Calibration
Goose	41°29'04.801" N 071°02'18.407" W	NGS-Monumented	Electronic
Cuttyhunk Light	41°24'51.805" N 070°57'00.334" W	Ship's Personnel	Electronic
Point Judith Lighthouse	41°21'39.323" N 071°28'54.826" W	NGS-Monumented	Electronic
Beavertail Lighthouse	41°26'57.348" N 071°23'59.693" W	NGS-Monumented	Electronic
Brenton Reef Light Tower	41°25'35.071" N 071°23'21.970" W	NGS-Monumented	Circle Calibration
Tank #8	40°58'47.362" N 072°38'49.172" W	Ship's Personnel	Electronic
Northville Calibration Dolphin	41°00'02.098" N 072°38'44.971" W	Ship's Personnel	Fixed Point Calibration

F. DIVING REPORTS

DIVING OPERATIONS

Date: August 17, 1983 Unit: Boat ships Rude & HECK

Divemaster: Johnny R. Carraway Diver-in-charge: Johnny R. Carraway

Purpose of dive: Investigate lobster trap buoys offshore of the Montauk Industries oil platform, Montauk, Long Island.

Equipment: Standard scuba, pneumo-hose, pop floats, search & buddy lines

Planned depth: 65-70 ft Planned duration: 30-60 min.

Divers	IN Pressure	Out Pressure	△ Pressure	In Time	Out Time	△ Time	Depth	Comments
Smith	3200 psi	2125 psi	1075 psi	1615	1622	7 min.	65 ft.	
Callahan	3005 psi	2185 psi	870 psi	1615	1622	7 min.	65 ft.	
Smith	2125 psi	700 psi	1425 psi	1633	1645	12 min.	65 ft.	
Callahan	2125 psi	800 psi	1325 psi	1633	1645	12 min.	65 ft.	
Carraway	2700 psi	1600 psi	900 psi	1704	1713	9 min.	65 ft.	
Clark	3100 psi	2150 psi	950 psi	1704	1713	9 min.	65 ft.	

Post dive comments: First item was a old lobster pot, it was a single pot and not part of a string line of pots. Second item was a string of two lobster pots (old Senelick pots with no marker buoy.) This was the dive where Tom Callahan had his injury.

Johnny R. Carraway
Divemaster Signature

Johnny R. Carraway
Diver-in-Charge Signature

H. LOCAL NOTICE TO MARINERS REPORT

NEGATIVE REPORT

J. DANGERS TO NAVIGATIONS REPORT

NEGATIVE REPORT

L. SIDE SCAN SONAR COVERAGE ABSTRACT - TARGET ABSTRACT - TARGET LIST

* Except - Beginning and end of lines over shoal areas.

R/H - 10 - 2 - 83

Sonar Coverage Abstract OPR - B660 - RU/HE-83 Item No.

Search Track Number	Range Scale (m)	Minimum * Towfish Height (m)	Minimum Effective Scanning Range (m)	Search Track Number	Range Scale (m)	Minimum * Towfish Height (m)	Minimum Effective Scanning Range (m)	Maximum Track Spacing (m)	200% ½ NM RADIUS FROM TERMINAL Coverage Analysis
7-13	100	7	69	134-140	100	6	59	53	200% Fixes 8-13, 135-140 100% Fixes 7-13, 134-140
14-21	"	7	69	134-140	"	6	59	50	200% Fixes 14-19, 135-140 100% Fixes 14-21, 134-140
14-21	"	7	69	141-149	"	7	69	53	200% Fixes 14-19, 142-147 100% Fixes 14-21, 141-149
22-32	"	7	69	141-149	"	7	69	69	200% Fixes 24-31, 142-147 100% Fixes 22-32, 141-149
22-32	"	7	69	150-160	"	9	89	69	200% Fixes 24-31, 152-159 100% Fixes 22-32, 150-160
33-43	"	8	79	150-160	"	9	89	55	200% Fixes 35-42, 152-159 100% Fixes 33-43, 150-160
33-43	"	8	79	161-173	"	8	79	55	200% Fixes 35-42, 162-171 100% Fixes 33-43, 161-173
44-55	"	8	79	161-173	"	8	79	70	200% Fixes 45-54, 162-171 100% Fixes 44-55, 161-173
44-55	"	8	79	174-186	"	10	99	78	200% Fixes 45-54, 175-184 100% Fixes 44-55, 174-186
58-71	"	8	79	174-186	"	10	99	55	200% Fixes 60-71, 175-184 100% Fixes 58-71, 174-186
58-71	"	8	79	187-199	"	9	89	70	200% Fixes 60-71, 189-199 100% Fixes 58-71, 187-199
74-85	"	8	79	187-199	"	9	89	60	200% Fixes 74-84, 189-199 100% Fixes 74-85, 187-199
74-85	"	8	79	200-211	"	8	79	55	200% Fixes 74-84, 201-209 100% Fixes 74-85, 200-211
86-99	"	8	79	200 211	"	8	79	75	200% Fixes 87-99, 201-209 100% Fixes 86-99, 200-211
86-99	"	8	79	212-225	"	10	99	55	200% Fixes 87-99, 214-225 100% Fixes 86-99, 212-225
100-110	"	8	79	212-225	"	10	99	53	200% Fixes 100-109, 214-225 100% Fixes 100-110, 212-225
100-110	"	8	79	226-235	"	8	79	55	200% Fixes 100-109, 226-234 100% Fixes 100-110, 226-235
111-123	"	8	79	226-235	"	8	79	48	200% Fixes 112-123, 226-234 100% Fixes 111-123, 226-235
111-123	"	8	79	236-249	"	10	99	58	200% Fixes 112-123, 237-249 100% Fixes 111-123, 236-249
124-133	"	8	79	236-249	"	10	99	[illegible]	200% Fixes 124-133, 237-249

SIDE SCAN TARGET ABSTRACT

DATE 16 AUG-30 AUG 1983

J.D. 228-242

OPR- B660-RU/HE-83
R/H 10-02-83

ITEM #NORTHVILLE TERMINAL FACE
SHIP HECK

TARGET NUMBER	J.D. TIME UCT	FIX #	COMPUTED RATES	TOW SPEED	LENGTH OF TOW (M)	LEAST ~~REDUCED~~ DEPTH (FT)	CHARTED DEPTH (FT)	HEIGHT OF FISH R1 (M)	R2 (M)	R3 (M)	R4 (M)	HEIGHT OF TARGET (M/~~FT~~)	RANGE OF TARGET (M)	WIDTH OF TARGET (M/~~FT~~)	TOWFISH LAYBACK (M)
1	228	9-11	R1-19490 R2- 2270	4	10.0	66	66	13.5	27.5	31	*	-	24.1	3.9	31.3
2	228	9-11	R1-19500 R2- 2320	4	10.0	65	66	13.5	21	21.5	22	0.3	16.3	0.6	31.3
3	228	9-11	R1-19550 R2- 2250	4	10.0	66	66	13.5	52	69	*	-	50.3	17.4	31.3
4	228	17	R1-19320 R2- 2330	4	10.0	66	68	14.5	52.5	54.2	56.0	0.5	50.6	1.8	31.3
5	228	28	R1-19415 R2- 2515	4	10.0	67	67	14.0	39.0	45.0	*	-	37.3	6.2	31.3
6	228	28	R1-19465 R2- 2525	4	10.0	68	68	14.0	45.0	48.0	*	-	42.8	3.1	31.3
7	228	41-42	R1-18560 R2- 2535	4	10.0	63	63	12.8	30.0	39.0	*	-	28.3	9.4	31.3
8	228	37-38	R1-19415 R2- 2515	4	10.0	67	67	13.5	57.0	62.5	*	-	56.0	5.6	31.3
9	228	94-95	R1-18850 R2- 2960	4	13.2	58	58	9.4	38.0	38.5	*	-	37.4	0.5	34.5
10	228	115-116	R1-20005 R2- 3073	4	13.2	67	67	13.0	26.0	27.0	*	-	23.9	1.1	34.5
11	228	128-129	R1-19675 R2- 3165	4	13.2	63	63	11.5	43.0	43.3	*	-	42.1	0.3	34.5
12	242	137-138	R1-19475 R2- 2260	4	9.9	66	66	13.5	56.0	56.2	*	-	54.4	0.2	31.2
13	242	144-145	R1-19390 R2- 2410	4	9.9	64	64	12.5	20.0	25.0	*	-	15.6	6.0	31.2
14	242	144-145	R1-19400 R2- 2500	4	9.9	67	67	13.0	71.0	80.0	*	-	69.8	9.1	31.2
15	228	52-53	R1-20073 R2- 2665	4	13.2	67	67	11.5	32.5	33	*	-	30.5	0.5	34.5

*No shadow observed; No height computation

R1 - Horton Pt.
R2 - Tank #8

All targets are insignificant.

SIDE SCAN TARGET ABSTRACT

DATE 30 AUG 1983 OPR- B660-RU/HE-83 ITEM #NORTHVILLE OFFSHORE

J.D. 242 R/H 10-02-83 SHIP HECK

TARGET NUMBER	J.D. TIME UCT	FIX #	COMPUTED RATES	TOW SPEED	LENGTH OF TOW (M)	LEAST DEPTH (FT)	CHARTED DEPTH (FT)	HEIGHT OF FISH R1 (M)	R2 (M)	R3 (M)	R4 (M)	HEIGHT OF TARGET (M/KT)	RANGE OF TARGET (M)	WIDTH OF TARGET (M/KT)	TOWFISH LAYBACK (M)
16	242	130	R1-20140 R2- 3235	4	13.9	67	68	13.5	39.0	39.5	40.5	0.3	36.7	0.5	27.8
17	242	169-170	R1-18720 R2- 2560	4	9.9	65	65	12.0	45.0	51.0	*	-	42.4	6.3	31.2
18	242	179-180	R1-19175 R2- 2628	4	9.9	64	64	11.0	74.5	83.5	*	-	73.1	9.1	31.2
19	242	177-178	R1-18623 R2- 2730	4	9.9	59	59	11.0	16.0	17.5	*	-	7.5	2.8	31.2
20	242	198-199	R1-18380 R2- 2725	4	13.9	60	60	9.0	64.0	65.0	*	-	62.8	1.0	27.8
21	242	237-238	R1-20750 R2- 3100	4	13.9	77	77	17.0	49.5	50.5	*	-	45.2	1.1	27.8

*No shadow observed; No height computation

R1 - Horton Pt.
R2 - Tank #8

All targets are insignificant.

OPR- B660-RU/HE-83

SHEET R/H 10-02-83

SIDE SCAN SONAR TARGET LIST

TARGET NUMBER	CHARTED DEPTH (FT)	LEAST ~~REDUCED~~ DEPTH (FT)	HEIGHT OF TARGET (FT)	WIDTH OF TARGET (FT)	POSITION	FURTHER INVESTIGATION TYPE	DATE	RESULTS	REMARKS
1,12	66	66	-	3.90	041-00-00.6 072-38-55.4			Not 10% of bottom depth	
2	66	65	0.98	1.97	041-00-02.3 072-38-57.5			"	
3	66	66	-	57.07	041-00-00.0 072-38-58.2				
4	68	66	1.64	5.90	041-00-02.9 072-38-49.1				
5,8,14	67	67	-	22.85	041-00-08.5 072-38-57.5				
6	68	68	-	3.10	041-00-08.8 072-39-00.4				
7	63	63	-	30.83	041-00-23.1 072-38-13.2				
9	58	58	-	1.64	041-00-23.1 072-38-40.7				
10	67	67	-	3.61	041-00-20.8 072-39-34.6				
11	63	63	-	0.98	041-00-26.8 072-39-22.7				
13	64	64	-	6.00	041-00-05.4 072-38-54.3				
15	67	67	-	1.64	041-00-08.2 072-39-29.4				
16	68	67	0.98	1.64	041-00-24.0 072-39-43.0				
17	65	65	-	20.66	041-00-08.0 072-38-23.4				
18	64	64	-	29.85	041-00-12.6 072-38-49.0				
19	59	59	-	9.18	041-00-13.6 072-38-22.8				
20	60	60	-	3.28	041-00-10.1 072-38-08.2				
21	77	77	-	3.61	041-00-10.6 072-40-03.5				

All targets are insignificant.

DATE: 9/20/83

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 845-2660 Newport, RI
846-7150 Bridgeport, CT

Period: July 20 - November 8, 1982

WIRE DRAG
~~HYDROGRAPHIC SHEET~~: OPR-B660-RU/HE-82

OPR: B660

Locality: Long Island Sound

Plane of reference (mean lower low water): 845-2660 = 1.81 feet
846-7150 = 2.05 feet

Height of Mean High Water above Plane of Reference is 845-2660 = 3.5 feet
846-7150 = 6.8 feet

REMARKS: Recommended Zoning

1. Item #1 - Zone on Newport, RI apply +10 minute time correction and x 0.94 range ratio.
2. Item #2 & 3 - Zone on Newport, RI apply +10 minute time correction and x 0.88 range ratio.
3. Item #4 & 5 - Zone on Bridgeport, CT apply -30 minute time correction and x 0.62 range ratio.
4. Item #6 - Zone on Bridgeport, CT apply -25 minute time correction and x 0.68 range ratio
5. Item #7 - Zone on Bridgeport, CT apply -15 minute time correction and x 0.83 range ratio
6. Item #8 - Zone on Bridgeport, CT apply -10 minute time correction and x 0.92 range ratio
7. Item #9 - Zone on Bridgeport, CT apply x 0.93 range ratio.

for Donald Cannon
Chief, Tidal Datums Section, Tides & Water Levels Branch

9/20/83

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

OPR-B660-RU/HE-82

8. Item #10 - Zone on Bridgeport, CT apply x 1.04 range ratio.

9. Item #11 - Zone on Bridgeport, CT apply x 0.98 range ratio.

10. Item #12 - Zone on Bridgeport, CT apply x 0.80 range ratio.

DATE: March 26, 1984

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Marine Center: Atlantic

OPR: B660

Hydrographic Sheet: R/H 5-1-83
R/H 5-3-83

Locality: Long Island Sound

Time Period: July 28 - September 21, 1983

Tide Station Used: 846-7150 Bridgeport, Connecticut

Plane of Reference (Mean Lower Low Water): 2.05 Ft.

Height of Mean High Water Above Plane of Reference: 6.8 Ft.

Remarks: Recommended Zoning:

apply x0.78 range ratio to all heights

James R. Hubbard
Chief, Tidal Datums Section

DATE: 08/21/84

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Marine Center: Atlantic

OPR: B660

Hydrographic Sheet: R/H 05-01-83/84

Locality: Long Island Sound

Time Period: June 11-12, 1984

Tide Station Used: 846-7150 Bridgeport, Connecticut

Plane of Reference (Mean Lower Low Water): 2.05 ft.

Height of Mean High Water Above Plane of Reference: 6.8 ft.

Remarks: Recommended Zoning:

Apply x0.78 range ratio to all heights.

James R Hubbard
Chief, Tidal Datums Section

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NO.: FE-241WD

Number of positions	32
Number of soundings	13
Number of control stations	5

	TIME-HOURS	DATE COMPLETED
Preprocessing Examination	13	15 APR 1983
Verification of Field Data	142	17 FEB 1989
Quality Control Checks	0	
Evaluation and Analysis	90	6 APR 1989
Final Inspection	10	30 MAR 1989
TOTAL TIME	242	
Marine Center Approval		7 APR 1989

Transmittal letter of survey and survey records will be included in the Descriptive Report to identify the records accompanying the survey.

NOAA FORM 61-29
(12-71)

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

REFERENCE NO.
MOA23-53-89

LETTER TRANSMITTING DATA

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

☐ ORDINARY MAIL ☐ AIR MAIL

☒ REGISTERED MAIL ☐ EXPRESS

☐ GBL *(Give number)* _____

TO:

Chief, Data Control Branch, N/CG243
Room 151, WSC-1
Hydrographic Surveys Branch
National Ocean Service
Rockville, MD 20852

DATE FORWARDED
26 April 1989

NUMBER OF PACKAGES
seven (7)

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.

FE-241WD (R/H-20-2-82)
OPR-B660, MASSACHUSETTS--CONNECTICUT--RHODE ISLAND--NEW YORK, RHODE ISLAND SOUND AND LONG ISLAND SOUND

Pkg. 1: (Box)
~~19~~ Side Scan Sonargrams (1982) for Items #1, 2, and 3.
~~12~~ Wire Drag Volumes (1982).
~~1~~ Tender Tester Record (1982).

Pkg. 2: (Box)
~~18~~ Side Scan Sonargrams (1982) for Items #4, 5, 9, 10, and 11.
~~7~~ Sounding Volumes (1982), Numbers 1 of 14 through 7 of 14.
~~1~~ Accordion Folder containing original field records (wire drag data and other associated data) for the following (1982) Year Days: 285, 286, 287, 292, 293, 294, 300, 301, 302, 305, 306, 307, 308, 312, 315, and 316. Also two (2) field wire drag A&D sheets, one (1) field hydrographic/side scan sheet, and one (1) paper copy of an O.S.I. survey.

DO NOT DISCARD ANY OF THIS DATA.

FROM: *(Signature)* Maurice B. Hickson, III
Maurice B. Hickson, III

RECEIVED THE ABOVE
(Name, Division, Date)
Dwayne S Clark
May 18, 1989

Return receipted copy to:

Chief, Hydrographic Surveys Branch,
N/MOA23
Atlantic Marine Center
439 W. York Street
Norfolk, VA 23510-1114

☆U.S.GPO:1983-0-684-006/1192

NOAA FORM 61-29 (12-71)

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

LETTER TRANSMITTING DATA

REFERENCE NO.
MOA23-53-89

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☒ REGISTERED MAIL ☐ EXPRESS
☐ GBL *(Give number)* _____

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National Ocean Service
Rockville, MD 20852

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FE-241WD (R/H-20-2-82)
OPR-B660, MASSACHUSETTS--CONNECTICUT--RHODE ISLAND--NEW YORK, RHODE ISLAND SOUND AND LONG ISLAND SOUND

Pkg. 3: (Box)
~~17~~ Side Scan Sonargrams (1982) for Items #6, 7, 8, and Northville.
~~7~~ Sounding Volumes (1982), Numbers 8 of 14 through 14 of 14.

Pkg. 4: (Box)
~~1~~ Accordion Folder containing original field records (echograms and wire drag data) for the following (1982) Year Days: 201, 202, 210, 214, 215, 216, 217, 218, 222, 223, 224, 230, 231, 232, 236, 237, 238, 239, and 242.
~~1~~ Accordion Folder containing original field records (echograms and wire drag data) for the following (1982) Year Days: 244, 245, 246, 251, 252, 253, 258, 259, 260, 264, 266, 267, 271, 272, 273, 274, 277, 278, and 291.

DO NOT DISCARD ANY OF THIS DATA.

FROM: *(Signature)* Maurice B. Hickson, III
Maurice B. Hickson, III

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Chief, Hydrographic Surveys Branch,
N/MOA23
Atlantic Marine Center
439 W. York Street
Norfolk, VA 23510-1114

☆U.S.GPO:1983-0-664-006/1192

NOAA FORM 61-29 (12-71)

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

REFERENCE NO.
MOA23-53-89

LETTER TRANSMITTING DATA

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

☐ ORDINARY MAIL ☐ AIR MAIL
☒ REGISTERED MAIL ☐ EXPRESS
☐ GBL (Give number) _____

TO:

Chief, Data Control Branch, N/CG243
Room 151, WSC-1
Hydrographic Surveys Branch
National Ocean Service
Rockville, MD 20852

DATE FORWARDED
26 April 1989

NUMBER OF PACKAGES
seven (7)

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FE-241WD (R/H-20-2-82)
OPR-B660, MASSACHUSETTS--CONNECTICUT--RHODE ISLAND--NEW YORK, RHODE ISLAND SOUND AND LONG ISLAND SOUND

Pkg. 4: (Box) - continued
- ~~1~~ Envelope containing four (4) field contact plots (Items #2, 3, 4, and 8), three (3) field wire drag A&D sheets (Items #7, 9, and 10), and one(1) field plot of reconnaissance hydrography (Item #11). (1982)
- ~~1~~ Envelope containing Smooth Tides. (1982)
- ~~1~~ Envelope containing Miscellaneous Data removed from the Original Descriptive Report.
- ~~1~~ Envelope containing eight (8) Smooth Position Overlays.

Pkg. 5: (Box)
- ~~24~~ Wire Drag Volumes (22 of year 1983 and 2 of year 1984).
- ~~1~~ Sounding Volume (1983).
- ~~2~~ Tender Tester Records (1983).
- ~~1~~ Envelope containing two (2) side scan sonargrams for (1983) Year Days 228 and 242.

DO NOT DISCARD ANY OF THIS DATA.

FROM: (Signature) Maurice B. Hickson, III
Maurice B. Hickson, III

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Chief, Hydrographic Surveys Branch,
N/MOA23
Atlantic Marine Center
439 W. York Street
Norfolk, VA 23510-1114

☆U.S.GPO:1983-0-664-006/1192

NOAA FORM 61-29
(12-71)

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

LETTER TRANSMITTING DATA

REFERENCE NO.
MOA23-53-89

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

☐ ORDINARY MAIL ☐ AIR MAIL
☒ REGISTERED MAIL ☐ EXPRESS
☐ GBL *(Give number)* _____

TO:

Chief, Data Control Branch, N/CG243
Room 151, WSC-1
Hydrographic Surveys Branch
National Ocean Service
Rockville, MD 20852

DATE FORWARDED
26 April 1989

NUMBER OF PACKAGES
seven (7)

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.

FE-241WD (R/H-20-2-82)
OPR-B660, MASSACHUSETTS--CONNECTICUT--RHODE ISLAND--NEW YORK, RHODE ISLAND SOUND AND LONG ISLAND SOUND

Pkg. 6: (Box)
1 Accordion Folder containing original field records (echograms, printouts, tester records, and plots) for the following (1983) Year Days: 209, 210, 213, 214, 215, 216, 221, 222, 223, 227, 228, 229, 230, 231, 241, 242, 243, 250, 252, 255, 259, 262, 263, and 264. Also two (2) field wire drag A&D sheets of the 1983 wire drag work.
1 Accordion Folder containing original field records (echograms, printouts, tester records, and plots) for (1984) Year Days 163 and 164. Also one (1) boatsheet.

Pkg. 7: (Envelope)
1 Original Descriptive Report containing eight (8) Smooth Sheets.

DO NOT DISCARD ANY OF THIS DATA.

FROM: *(Signature)*
Maurice B. Hickson, III

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Chief, Hydrographic Surveys Branch,
N/MOA23
Atlantic Marine Center
439 W. York Street
Norfolk, VA 23510-1114

☆U.S.GPO:1983-0-664-006/1192

ATLANTIC MARINE CENTER
ADDENDUM TO THE DESCRIPTIVE REPORT

SURVEY NO.: FE-241WD & H-10075WD

FIELD NO.:* R/H-20-1-82
R/H-20-2-82
R/H-20-3-82
R/H-20-4-82
R/H-20-5-82
R/H-20-6-82
R/H-20-7-82
R/H-20-8-82
R/H-20-9-82
R/H-10-2-83
R/H-5-1-83
R/H-5-3-83
R/H-5-1-84
*Registered under R/H-20-2-82

SURVEYED: July 16, 1982 through June 16, 1984

SCALE: 1:20,000
1:10,000
1:5,000

PROJECT NO.: OPR-B660-RU/HE-82-84

SOUNDINGS: Pneumatic Depth Gauge & Wire Drag

CONTROL: Del Norte 520 (Range-Range)

Chief of Party.....R. C. Arnold
.....D. D. Winter
.....R. K. Norris

Surveyed by.....D. D. Winter
.....R. K. Norris
.....J. W. Bailey
.....S. R. Barnum
.....N. G. Millett
.....E. M. Clark
.....T. G. Callahan

1. INTRODUCTION

a. The purpose of this survey is adequately defined in the Descriptive Report and the Project Instructions. Processing of this survey has been modified so that only the items that fully meet the disproval or verification (with least depth) criteria have been processed. Only the records and the results of the investigation of Item #2 has been fully processed. The investigation of Items #1, 3, 4, 5, 6, 7, 8, 9, 10, 11, and the Northville Oil Terminal have not been processed. However, the positions and least depths on the boulders found during the investigation of Item #3, the position and least depth on the obstruction found during the

investigation of Item #8, and the wire drag clearance depths over the wrecks found during the investigations of Items #6, 7, and 9 were verified and are smooth plotted. Only the side scan sonar data for Item #2 has been processed. No wire drag data other than the previously noted clearance depths have been processed. This modified and limited processing is considered sufficient in consideration of the charting needs and the reassignment of all items not resolved.

b. Eight smooth plots have been generated and are attached to this report. One of the smooth plots is of the verified positions and least depths on the two parts of a sunken wreck found during the investigation of Item #2, one smooth plot is of the verified positions and least depths on two boulders found during the investigation of Item #3, and one other of the smooth plots is of the verified position and least depth on a submerged obstruction found during the investigation of Item #8. The other five smooth plots are of the unverified wrecks and obstructions reported by the hydrographer from the investigations of Items #4, 5, 6, 7, 9, and 10. These plots are considered the final plots or smooth sheets for this survey.

c. Corrections and notes made by the evaluator to the Descriptive Report are denoted in red ink.

2. CONTROL AND SHORELINE

a. Horizontal control stations used during this survey were not verified during the modified processing of this survey. Positioning methods are adequately discussed in the Descriptive Report. Calibration methods are adequately discussed in the Descriptive Report. The horizontal datum for this survey is the North American Datum of 1927. The mean shift between the survey datum (NAD 1927) and NAD 1983 has not been computed for this survey.

b. No shoreline exists within the limits of this survey.

3. HYDROGRAPHY

The only soundings taken on this survey of charting value are the least depths taken on a wreck (two sections), an obstruction, and two boulders found during the investigations of Items #2, 3, and 8. All other soundings are of reconnaissance value only and not suitable for charting except as "reported" soundings. The wire drag clearance depths smooth plotted and noted in this report are verified and are suitable for charting.

4. CONDITION OF SURVEY

The adequacy of the final field sheets, survey records, and reports, and conformity to the requirements of the HYDROGRAPHIC MANUAL, the PROVISIONAL SIDE SCAN SONAR MANUAL, and the WIRE DRAG MANUAL were not considered during the modified processing of this survey.

5. JUNCTIONS

This survey junctions with H-10162WD (1983-84), FE-257WD (1983-84), and D-15 (1983). These junctions were not accomplished during modified processing.

6. COMPARISON WITH SURVEYS

Comparisons with prior surveys were not accomplished during modified processing.

7. COMPARISON WITH CHARTS 12354 (25th Ed., July 31, 1982)
12358 (14th Ed., July 10, 1982)
12363 (30th Ed., Jan. 31, 1981)
13218 (25th Ed., Nov. 28, 1981)

The investigated assigned items and the other wrecks, rocks, and obstructions found by this survey are addressed as follows:

a. Assigned Item #1 (AWOIS #1898), a charted dangerous sunken wreck, PA, in Latitude 41°25'00"N, Longitude 71°05'00"W, originated with Notice to Mariners No. 3 of 1970 and was later revised by Local Notice to Mariners No. 51 of 1969. This wreck is identified as the SEVEN SEAS, a 27-foot cabin cruiser. This item was not found and was not disproved. No processing was accomplished on this item as it is to be reassigned. It is recommended that this item be retained on the charts as ~~presently charted~~ a dangerous wreck. The hydrographer notes that several significant contacts were evident on the side scan sonargrams. No target lists or target abstracts were found in the survey records. During the preprocessing of this survey it was noted that numerous contacts exist on the side scan sonargrams for this item. A contact having the appearance of a wreck was found in the vicinity of Latitude 41°26'07"N, Longitude 71°04'47"W. This wreck rises above the bottom an estimated 17½ feet in charted depths of 34 to 57 feet. This contact is recommended to be charted as a ~~dangerous~~ sunken wreck in the approximate position (±75 meters) determined by the present survey.

Entered mdM 6/29/89

AWOIS #3047 Superseded by FE375

b. Assigned Item #2, a charted dangerous sunken wreck, cleared by 44 feet, in Latitude 41°19'46"N, Longitude 71°25'47"W, originated with Notice to Mariners dated 6/13/45 and was later revised by H-7029WD (1948). This wreck is

identified as the BLACKPOINT, a 5,353-ton freighter torpedoed May 5, 1945. This wreck was found broken into two sections and was investigated by divers. The bow (AWOIS #1874) was found in Latitude 41°19'46.58"N, Longitude 71°25'47.24"W with a least depth of 66 feet. The stern (AWOIS #2712) was found in Latitude 41°19'32.97"N, Longitude 71°25'47.74"W with a least depth of 64 feet. These two sections of this wreck are recommended to be charted in the positions determined and with the least depths determined by this investigation as dangerous sunken wrecks. This wreck is smooth plotted on Smooth Sheet #1 of 8 which is attached to this report. No other contacts were found during this investigation. Item #2 is considered complete and no additional field work is recommended.

Entered AWOIS 6/89 MSM

c. Assigned Item #3 (AWOIS #1865), a charted dangerous sunken wreck, PA, 10 feet reported, in Latitude 41°18'06"N, Longitude 71°28'00"W, originated with Local Notice to Mariners No. 30 of 1974. This wreck is identified as the SHEARWATER, a 60-foot fishing vessel. This wreck was not found by the present survey. Insufficient side scan sonar coverage was accomplished to claim disproval. This item was considered incomplete in the 1982 Descriptive Report. It is recommended that this item be retained as presently charted. The hydrographer notes several contacts were found within the area searched but only two were investigated. The two contacts investigated are boulders. These boulders were positioned and least depths obtained by this investigation. These two boulders are recommended to be charted in the positions determined by the present survey (in Latitude 41°18'50.70"N, Longitude 71°28'19.43"W) as a 48-foot sounding on rock and (in Latitude 41°17'44.96"N, Longitude 71°27'50.51"W) as a 52-foot sounding on rock. These two boulders are smooth plotted on Smooth Sheet #2 of 8 which is attached to this report. During the preprocessing of this survey it was noted that numerous contacts exist on the side scan sonargrams for this item. No processing other than the verification of the positions and least depths on the boulders was accomplished for this item as it is to be reassigned. No target lists or abstracts were found in the survey records.

superceded by L-183-93

Entered AWOIS 11/89 MSM

#7901 and 7902

Revise link ED to PD and restore (10 ft rep) note

d. Assigned Item #4 (AWOIS #1813), a charted nondangerous sunken wreck, PA, in Latitude 41°10'N, Longitude 72°26'W, originated with Local Notice to Mariners No. 50 of 1971. This wreck is identified as the BARATARIA, a steel-hulled tug, 68.7 feet in length, 18.0 feet wide, and a draft of 7.6 feet. The hydrographer reports that only two significant contacts were found during this investigation. These contacts were not investigated by divers. The positions listed for these contacts are by side scan sonar analysis. The hydrographer believes that the contact in Latitude 41°10'29.52"N, Longitude 72°25'34.40"W is the BARATARIA, Item #4, and the contact in Latitude

41°09'19.25"N. Longitude 72°25'04.09"W is the THAMES, Item #5. Insufficient side scan sonar coverage was accomplished to claim disproval of Item #4. It is recommended that both contacts be charted as recommended in the Evaluation Report of FE-257WD (1983-84). Both contacts are cleared by wire drag by FE-257WD (1983-84). These contacts are smooth plotted as wrecks on Smooth Sheet #3 of 8 which is attached to this report. No processing was accomplished for this item (#4). No target lists or abstracts were found in the survey records. Restore nondangerous wk sym. previously deleted thru preliminary data from this survey (CL 1200/82)

SS/BY FE 257

e. Assigned Item #5 (AWOIS #1814), a charted dangerous sunken wreck, PA, in Latitude 41°10'N, Longitude 72°28'W, originated with Local Notice to Mariners No. 40 of 1973. This wreck is identified as the THAMES, an iron-hulled tug, 57 feet in length, 14 feet wide, 6.6-foot draft, and a weight of 37 gross tons. This wreck was not found during this investigation. A contact that the hydrographer believed was this item was found during the investigation of Item #4. Insufficient side scan sonar coverage was accomplished to disprove this item. It is recommended that this item be retained as presently charted until disproved. No contacts were mentioned by the hydrographer for this investigation. No target lists or abstracts were found in the survey records. No processing was accomplished for this item. Restore dangerous wk symbol PA. previously deleted through preliminary data from this survey. (CL 1200/82)

f. Assigned Item #6 (AWOIS #1818), a charted dangerous sunken wreck (40 feet reported), in Latitude 41°10'36"N, Longitude 72°31'39"W, originated with Notice to Mariners No. 3 of 1958. This wreck is identified as a sunken coal barge, 260 feet in length, 35 feet wide, and covered by 40 feet of water. This wreck was found during this investigation in Latitude 41°10'47.598"N, Longitude 72°31'39.033"W. This item was identified and positioned solely by side scan sonar analysis. No dive investigation was accomplished on this item. No other contacts are noted by the hydrographer in conjunction with this item investigation. No target lists or abstracts were found in the survey records. Office processing was limited for this item to plotting its position and the verification of the wire drag clearance depth of 56 feet. This wreck is smooth plotted on Smooth Sheet #4 of 8 which is attached to this report. It is recommended that this wreck be charted in the position determined by the present survey as a 56-foot wire drag depth with a danger curve and labeled wreck (Wk). Additional field work is not recommended on this item.

Entered AWOIS 9/89 GMSM

g. Assigned Item #7 (AWOIS #1807), a charted dangerous sunken wreck (42 feet reported), in Latitude 41°09'17.5"N, Longitude 72°44'58.5"W, originated with Local Notice to Mariners No. 14 of 1975 and later revised by Local Notice to Mariners No. 16 of 1975 and Local Notice to Mariners No. 33 of 1977. This wreck is identified as a

wooden drydock covered by 42 feet of water. This wreck was found during this investigation in Latitude 41°09'21.98"N, Longitude 72°44'58.01"W. This item was positioned by side scan sonar analysis and wire drag hang. A diver investigation was conducted on this wreck but was unsuccessful in determining the position or the least depth. No other contacts are noted by the hydrographer in conjunction with this item investigation. No target lists or abstracts were found in the survey records. Office processing was limited for this item to plotting its position and the verification of the wire drag hang at 49 feet and the wire drag clearance depth of 42 feet. This wreck is smooth plotted on Smooth Sheet #5 of 8 which is attached to this report. It is recommended that this wreck be charted in the position determined by the present survey as a 42-foot depth wire drag depth with a danger curve and labeled wreck (Wk). Additional field work on this item is not recommended.

Entered AWOIS 9/89 CMSM

h. Assigned Item #8 (AWOIS #1827), a charted dangerous sunken wreck in Latitude 41°12'20"N, Longitude 72°54'30"W, originated with Notice to Mariners No. 7 of 1966. This wreck was not found by this investigation. The side scan sonar coverage is not considered sufficient for item disproval. It is recommended that this item be retained as presently charted and is recommended to be reinvestigated. Only one contact is noted in conjunction with this item investigation. This contact, in Latitude 41°13'22.18"N, Longitude 72°53'37.36"W, was investigated by divers and is identified as a steel "I" beam with a least depth of 25.7 feet. No target lists or abstracts were found in the survey records. A cursory examination of the side scan sonar records of this investigation was made and several suspicious contacts were seen on the sonargrams. No processing except the verification of the position and least depth on the "I" beam found was accomplished for this item as it is to be reassigned. This obstruction is smooth plotted on Smooth Sheet #6 of 8 which is attached to this report. It is recommended that this obstruction be charted as a least depth of 25 feet within a danger curve and labeled obstruction (Obstr) in the position determined by the present survey.

Will be reassigned

i. Assigned Item #9 (AWOIS #1766), a charted dangerous sunken wreck, (50 feet reported), in Latitude 41°00'38"N, Longitude 72°58'18"W, originated with Notice to Mariners No. 19 of 1942 and later revised by Notice to Mariners No. 34 of 1944. This wreck is identified as a schooner. This wreck was found during this investigation in Latitude 41°00'39.74"N, Longitude 72°58'23.47"W. This item was positioned solely by side scan sonar analysis. A diver investigation was conducted on this wreck but was unsuccessful in determining the position or the least depth. No other contacts are noted by the hydrographer in

Entered AWOIS 9/89 CMSM

conjunction with this item investigation. During the preprocessing of this survey it was noted that numerous contacts exist on the side scan sonargrams for this item. No target lists or abstracts were found in the survey records. The wire drag clearance strips clearing this item were processed and provide a clearance depth of 64 feet. This wreck is smooth plotted on Smooth Sheet #7 of 8 which is attached to this report. It is recommended that this wreck be charted in the position determined by the present survey as a 64-foot wire drag depth with a danger curve and labeled wreck (Wk). Additional field work is not recommended on this item.

j. Assigned Item #10 (AWOIS #1779), a charted dangerous submerged wreckage, cleared by 35 feet, in Latitude 41°05'00"N, Longitude 73°16'17"W, originated with prior survey H-5219WD (1932). The hydrographer found three contacts during the side scan sonar search for this item. These contacts were found in Latitude 41°04'43"N, Longitude 73°16'13"W; Latitude 41°05'03"N, Longitude 73°16'08"W; Latitude 41°05'05"N, Longitude 73°16'12"W. They were not investigated. These contacts were positioned solely by side scan sonar analysis and are smooth plotted from this information as dangerous submerged obstructions on Smooth Sheet #8 of 8 which is attached to this report. These contacts were reinvestigated by side scan sonar during the 1988 field season and it was concluded that these contacts were not significant. It is recommended that these contacts not be charted. The results will be further addressed in the Evaluation Report of FE-321SS (1988) when its processing is complete. There is not sufficient information to consider any of these contacts as the item being sought. No other contacts are noted by the hydrographer in conjunction with this investigation. During the preprocessing of this survey it was noted that numerous suspicious contacts exist on the side scan sonargrams for this item. No target lists or abstracts were found in the survey records. The item being sought (Item #10) is not considered disproved. No processing was accomplished for this item as it is to be reassigned. It is recommended that this presently charted dangerous submerged wreckage (Item #10), cleared by 35 feet, be retained as presently charted. Disposition of item 10 and additional SSS contacts will be addressed in Evaluation Report for FE 321SS.

k. Assigned Item #11 (AWOIS #1769), a 38-foot sounding on a dangerous submerged obstruction (reported 1981) in Latitude 41°02'36"N, Longitude 73°03'48"W, originated with Chart Letter No. 453 of 1981 and later revised by Chart Letter No. 838 of 1981. This item is reported to be pinnacle shoal. This item was not found during this investigation. The search conducted is not considered sufficient to disprove this item but does cast serious doubt on its existence. No side scan sonar contacts are noted by the hydrographer in conjunction with this item investigation. No target lists or abstracts were found in

the survey records. During the preprocessing of this survey it was noted that several contacts exist on the side scan sonargrams for this item but none of the contacts appear to be large enough to be the item. No processing was accomplished for this item as it is to be reassigned. It is recommended that this presently charted 38-foot sounding on a dangerous submerged obstruction (Item #11) be retained as presently charted. See addendum to this report. Item considered disproved.

1. The proposed tanker route to the Northville Oil Terminal Offshore Platform was assigned for clearance on this project. The requirements for clearance and the parameters defining the tanker route are adequately defined in change #2 of the Project Instructions. From a cursory examination of the field records, this survey completed the area of the corridor from the terminal platform north to Latitude 41°04"N. A review of the present survey records indicate no groundings other than anticipated groundings, no hangs except on lobster pots, and no significant side scan sonar contacts were found. This data was not processed. No changes to the charted data within this area are recommended.

No aids to navigation, fixed or floating, were verified during modified processing. It is recommended that all aids to navigation common to the area of the present survey be charted in accordance with the most current available information.

8. COMPLIANCE WITH INSTRUCTIONS

Compliance of this survey with the Project Instructions was not considered during this modified processing.

9. ADDITIONAL FIELD WORK

In general the adequacy of this survey was not considered during modified processing, except as it serves charting needs. Additional field work is addressed in section 7. of this report.

Maurice B. Hickson, III
Cartographer
Modified and Limited Verification of Field Data
Modified and Limited Evaluation and Analysis

INSPECTION REPORT
FE-241WD

The completed wire drag survey has been examined with regards to presentation of survey results. The survey complies with National Ocean Service requirements except as noted in the Addendum to the Descriptive Report. This survey is not to be considered basic hydrographic survey data and is not approved as such. Only the data that has been verified, smooth plotted, and addressed in the Addendum to the Descriptive Report is approved for charting.

Inspected

R. D. Sanocki
Chief, Hydrographic Surveys
Processing Section
Hydrographic Surveys Branch

William A. Wert, LCDR, NOAA
Chief, Hydrographic Surveys Branch

Approved: 7 April 1989

Ray E. Moses, RADM, NOAA
Director, Atlantic Marine Center

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

NOV 27 1989

MEMORANDUM FOR: Commander Russell C. Arnold, NOAA
Chief, Hydrographic Surveys Branch

FROM: Lieutenant Commander Maureen R. Kenny, NOAA
Chief, Operations Section
Hydrographic Surveys Branch

SUBJECT: Addendum to Survey FE-241WD

The originating source and survey records for item 11 (AWOIS #1769) have been reviewed with the following results.

The charted shoal originated with a report from a ship which included a photocopy of the echogram, as well as information on the vessel's draft, speed, course, and the time period during which the shoal was encountered. Upon examination of this data it was noted that it took 9 minutes to pass over the shoal. Considering the vessel's speed this would indicate that the shoal is over 2-miles wide. Also, the echo-sounder trace provided by the ship shows that the depths surrounding the shoal were 80 to 90 feet. However the charted depths in this area, which were confirmed by this field examination and prior survey H-8967 (1967), range from 99 to 126 feet.

The position plot and side scan sonargrams have been reviewed and it has been determined that 100-percent side scan coverage was achieved for a 1-mile radius around the reported position. There is no indication of either shoaling or an obstruction on these sonargrams.

If a 2-mile wide shoal existed in the reported position, there would be some indication on both the prior survey and this field examination. Considering the discrepancy between the surrounding depths as indicated on the originating source and the charted depths, there is a strong possibility that the Captain who reported the shoal was confused about his position.

The field examination is considered adequate to disprove this shoal and it is recommended that the 38 foot sounding and the note "Obstr rep 1981" be deleted from the chart.

cc:
N/CG244 - Lawrence

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

JAN 08 1990

MEMORANDUM FOR: Captain Donald J. Florwick, NOAA
Chief, Mapping and Charting Branch

FROM: Russell C. Arnold
Commander Russell C. Arnold, NOAA
Chief, Hydrographic Surveys Branch

SUBJECT: Charting Recommendations for Chart 12364

While reviewing the survey records for assigned item no. 11 (AWOIS no. 1769) for FE-241 (1982), a significant contact was noted on the side scan sonargrams. This contact has the appearance of a wreck, is approximately 20 meters long, and rises about 17 feet above the bottom.

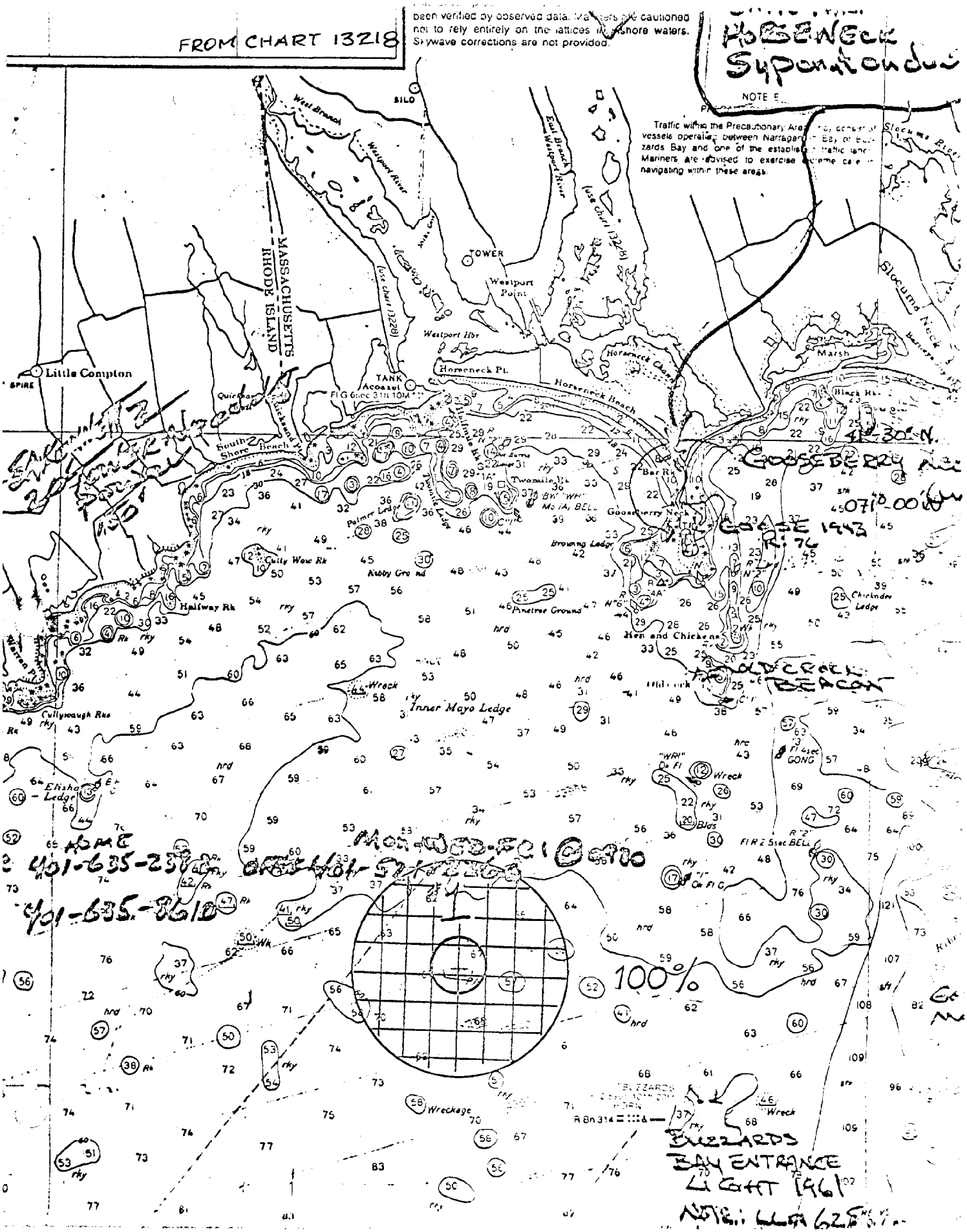
It is recommended that a nondangerous obstruction (95 ft rep 1982) be charted in latitude 41°02'36"N, longitude 73°04'25.5"W. The depth was estimated by scaling the height above the bottom from the side scan sonar records. The position was determined by computing offsets from the vessel's track. Reconnaissance hydrography acquired during this survey indicated depths of 112 feet, corrected for predicted tides, in the area of this obstruction.

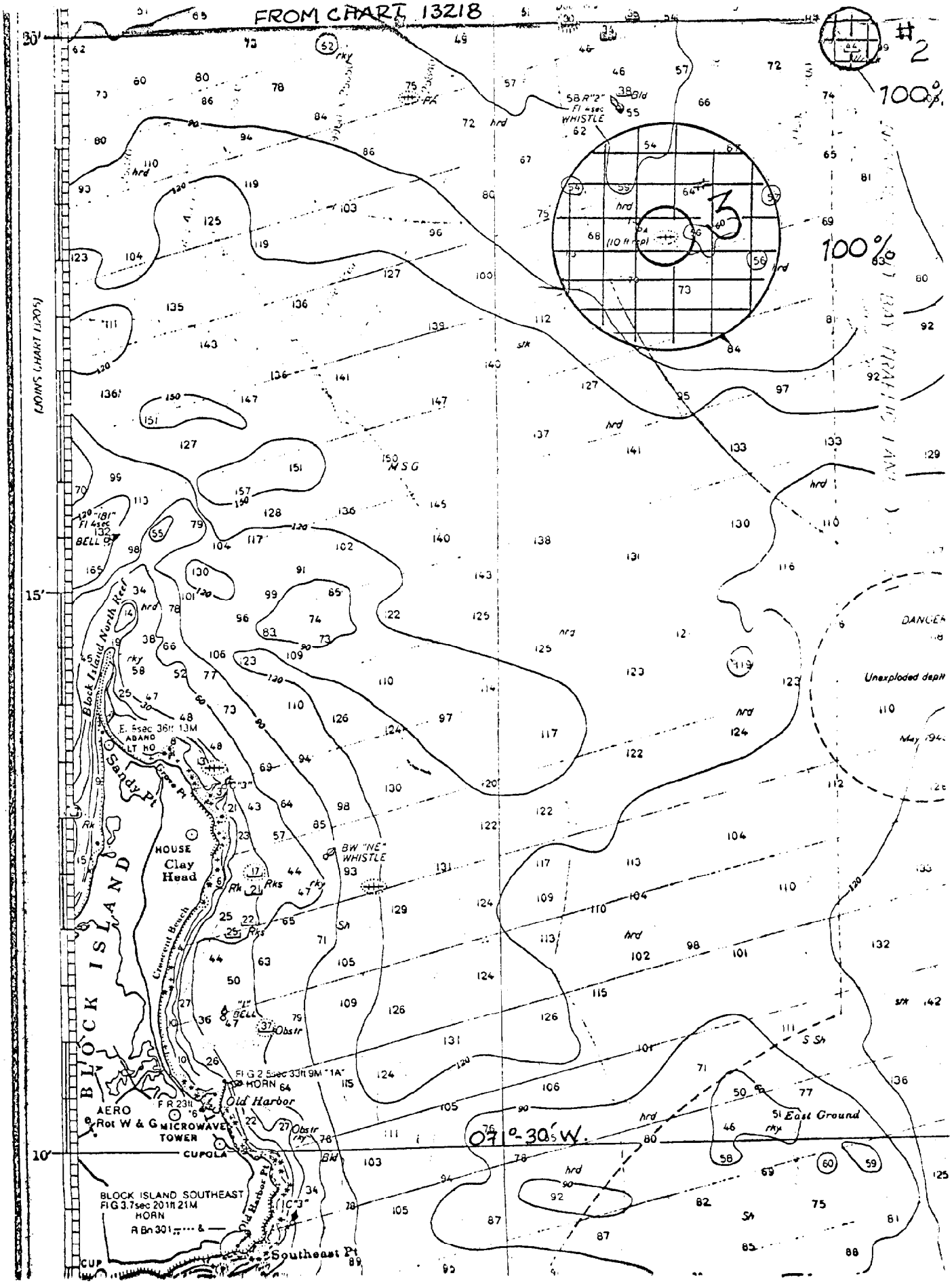
This obstruction may be assigned for further investigation during the 1990 field season.

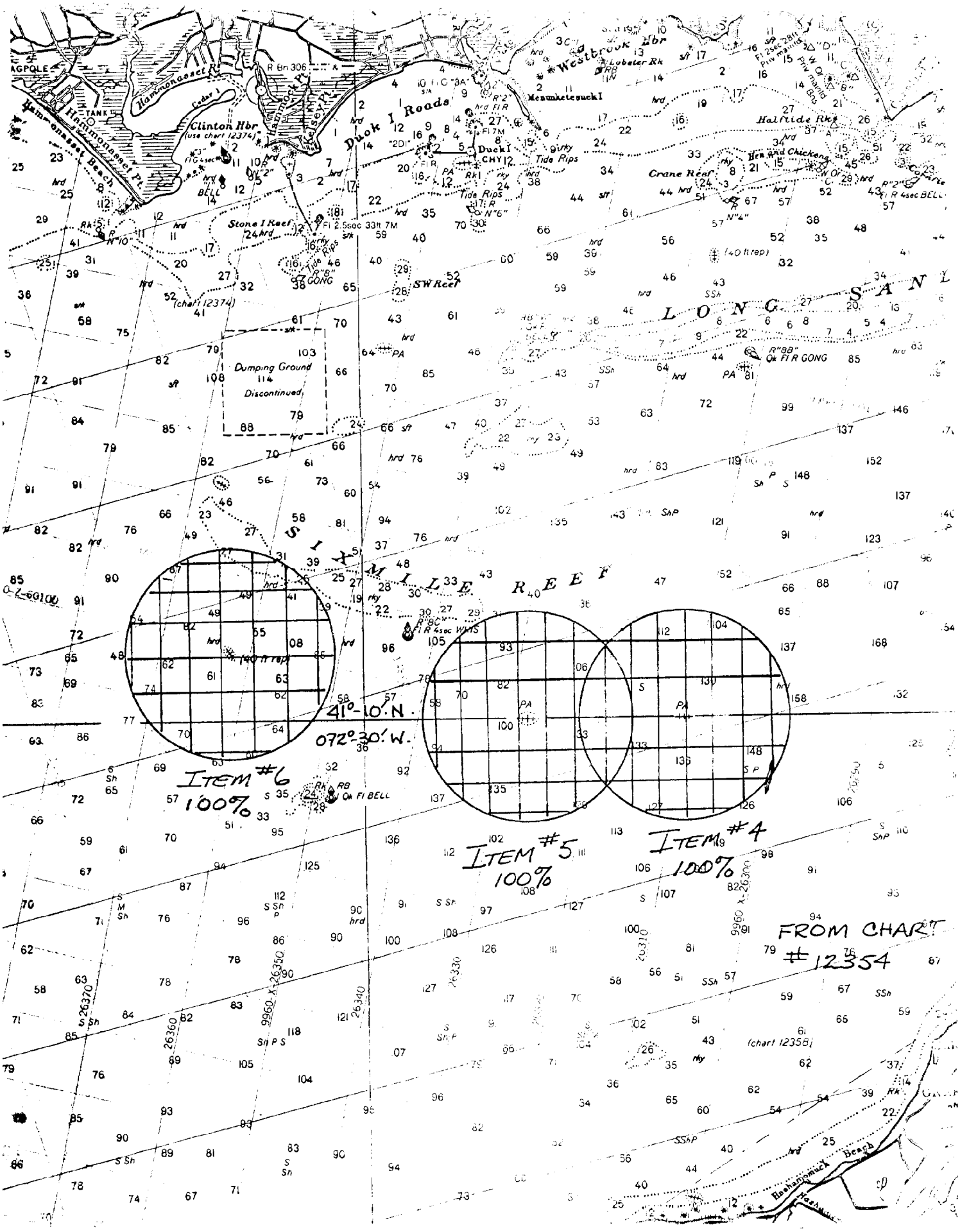
cc:
N/CG244 - Lawrence

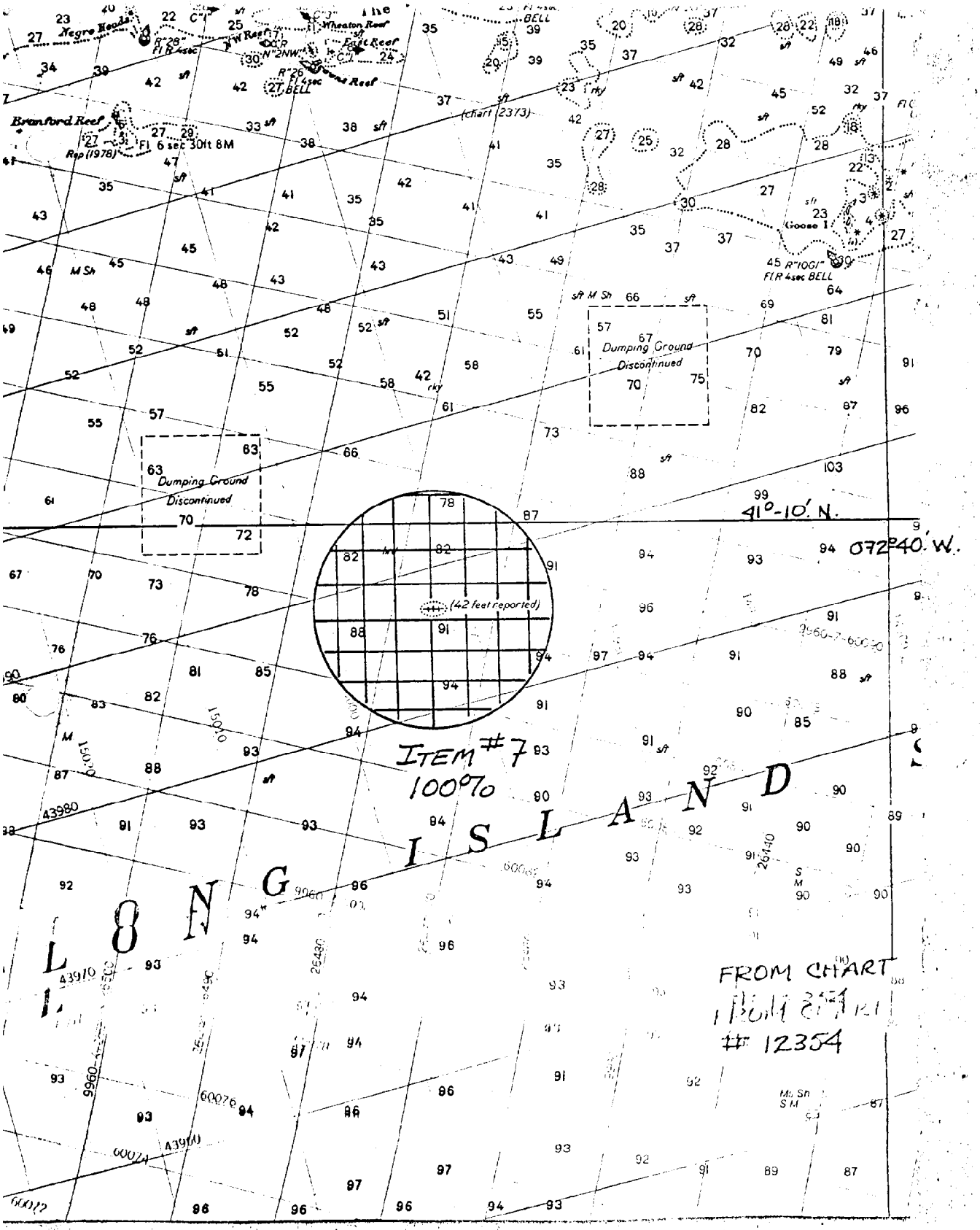
AWOIS #7539

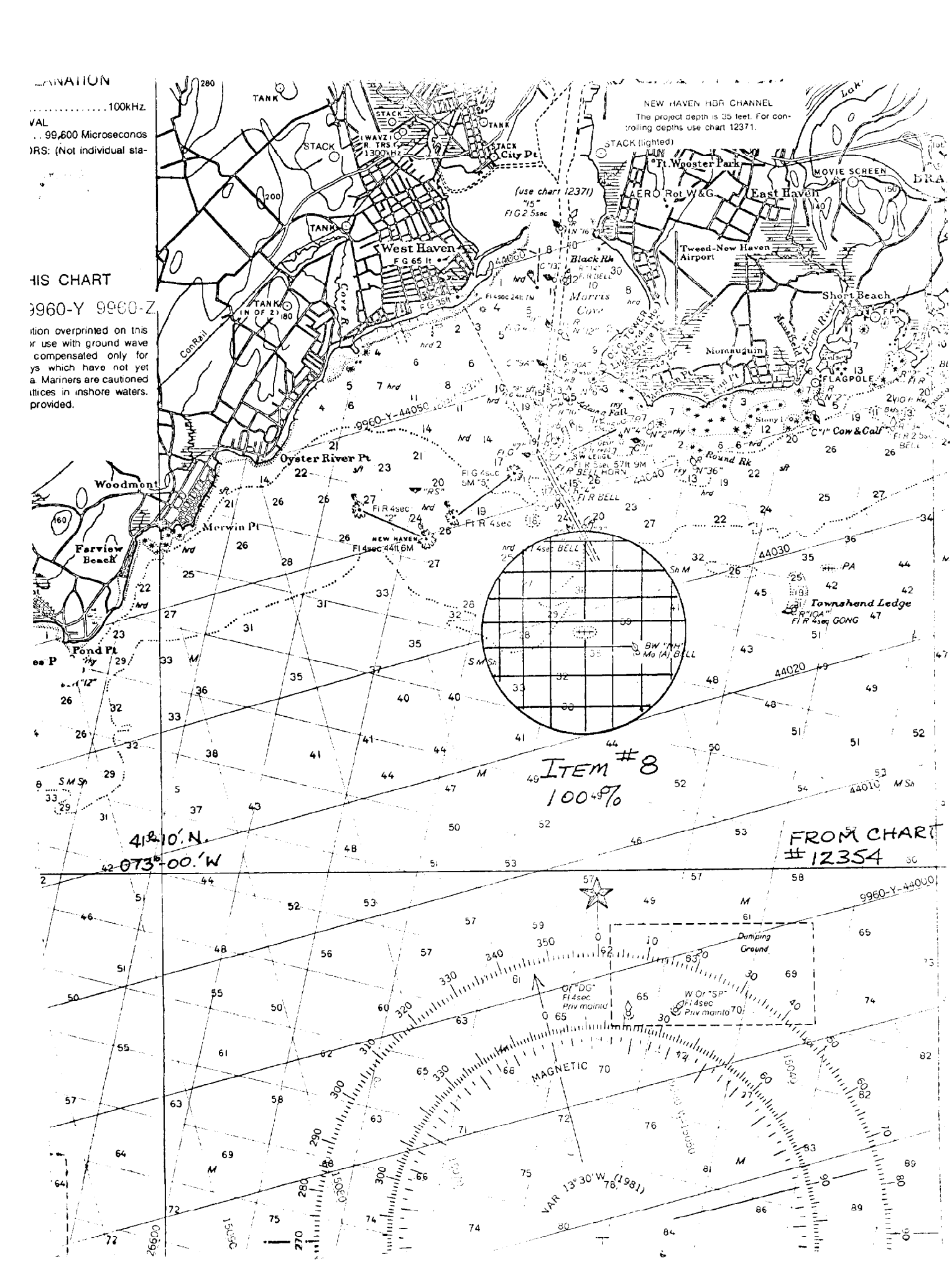
Contact found on sonargrams for SD273; 45-65M to port in position 91.3-91.4; 20m fish height; 100 ft (30.5M) layback

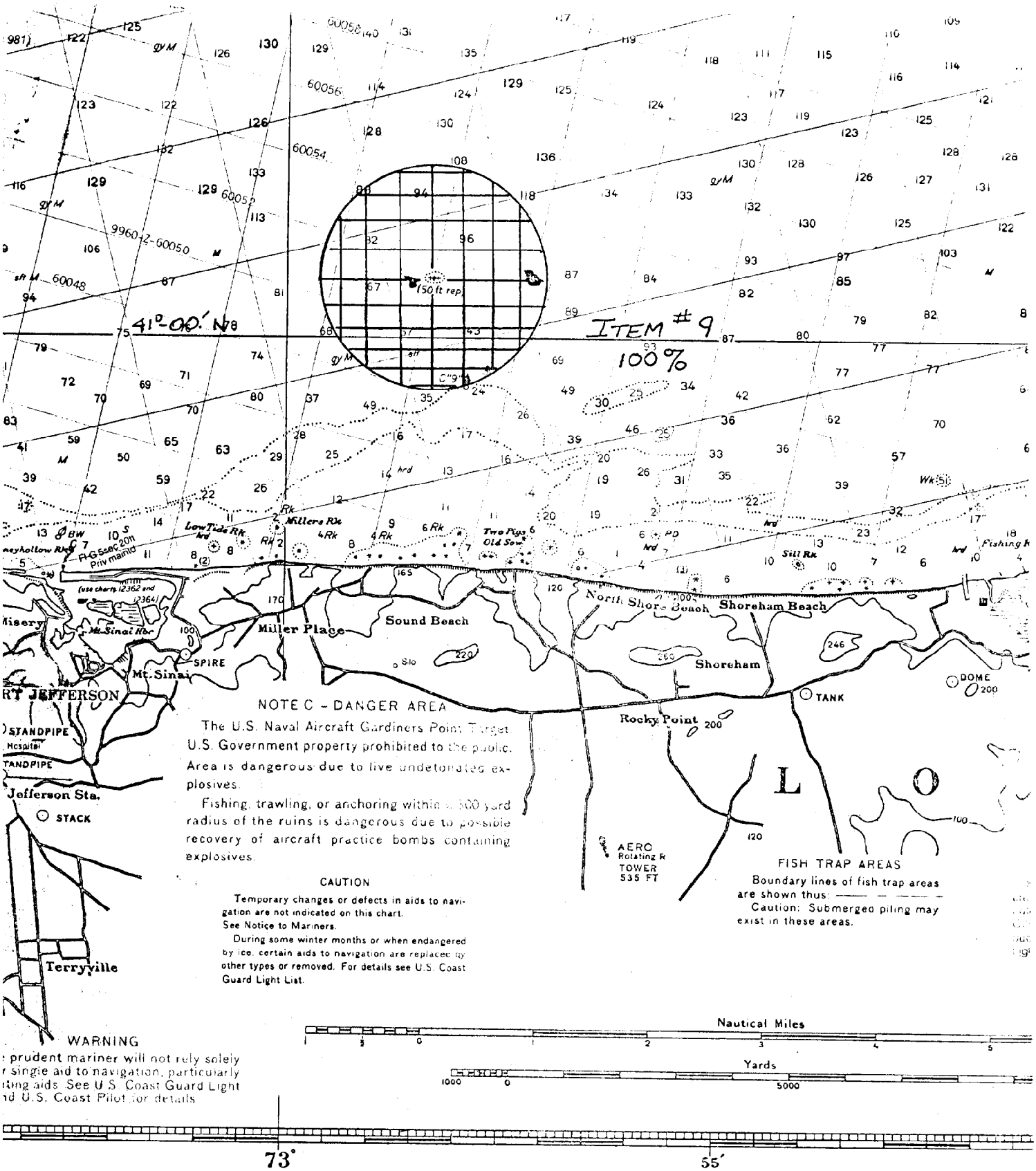

FROM CHART 13218
been verified by observed data. Mariners are cautioned not to rely entirely on the lattices in shore waters. Skywave corrections are not provided.
NOTE E
Traffic within the Precautionary Area may consist of vessels operating between Narragansett Bay or Buzzards Bay and one of the established traffic lanes. Mariners are advised to exercise extreme care in navigating within these areas.
MASSACHUSETTS - RHODE ISLAND
SILO
TOWER
TANK
Little Compton
Westport Point
Westport Hbr
Horseneck Pt.
Horseneck Beach
Marsh
Slocums Neck
Barrington
South Shore Beach
Twomile Rk
Twomile Ledge
Palmer Ledge
Cully Wow Rk
Kirby Ground
Halfway Rk
Pinetree Ground
Hen and Chickens
Browning Ledge
Gooseberry Neck
Bar Rk
Chickmuit Ledge
Inner Mayo Ledge
Cullywaugh Rks
Elisha - Ledge
Wreck
Wreckage
Fl 4sec GONG
Fl R 2 5sec BELL
BUZZARDS BAY ENTRANCE LIGHT 1961
41° 30' N.
071° 00' W
GOOSEBERRY NECK LIGHT 1943
OLD CREEK BEACON
100%


FROM CHART 13218
#2
100%
100%
03
Block Island North Reef
Sandy Pt
Clay Head
HOUSE
BLOCK ISLAND
Old Harbor
Southeast Pt
East Ground
071°-30'W.
DANGER
Unexploded depth
BW "NE" WHISTLE
BELL
HORN
AERO
MICROWAVE TOWER
CUPOLA
BLOCK ISLAND SOUTHEAST
FIG 3.7sec 201ft 21M
HORN
E. 5sec 36ft 13M
ABAND LT HO
20'
15'
10'


Hammonasset Pt.
Hammonasset Beach
Clinton Hbr
(use chart 12374)
Duck I Roads
Duck I
Stone I Reef
24hrd
SW Reef
Dumping Ground
114
Discontinued
Westbrook Hbr
Meanmketesuck I
Halfmide Rk
Crane Reef
Tide Rips
LONG ISLAND
SIX MILE REEF
41°-10'N.
072°-30'W.
ITEM #6
100%
ITEM #5
100%
ITEM #4
100%
FROM CHART
#12354
(chart 12358)
Hammonasset Beach


Negro Heads
Wheaton Reef
Fort Reef
Branford Reef
Fl 6 sec 30ft 8M
Rep (1978)
(chart 2373)
Goose I
Dumping Ground
Discontinued
Dumping Ground
Discontinued
41°-10'N.
072°40'W.
(42 feet reported)
ITEM #7
100%
LONG ISLAND
FROM CHART
#12354


NEW HAVEN HBR CHANNEL
The project depth is 35 feet. For controlling depths use chart 12371.
(use chart 12371)
West Haven
Oyster River Pt
Woodmont
Merwin Pt
Farview Beach
Pond Pt
Black Rk
Morris Cove
Tweed-New Haven Airport
East Haven
Ft. Wooster Park
Short Beach
Morningquin
Townshend Ledge
Round Rk
Dumping Ground
MAGNETIC
VAR 13° 30' W (1981)
ITEM #8
100%
41° 10'. N.
073°-00.'W
FROM CHART #12354

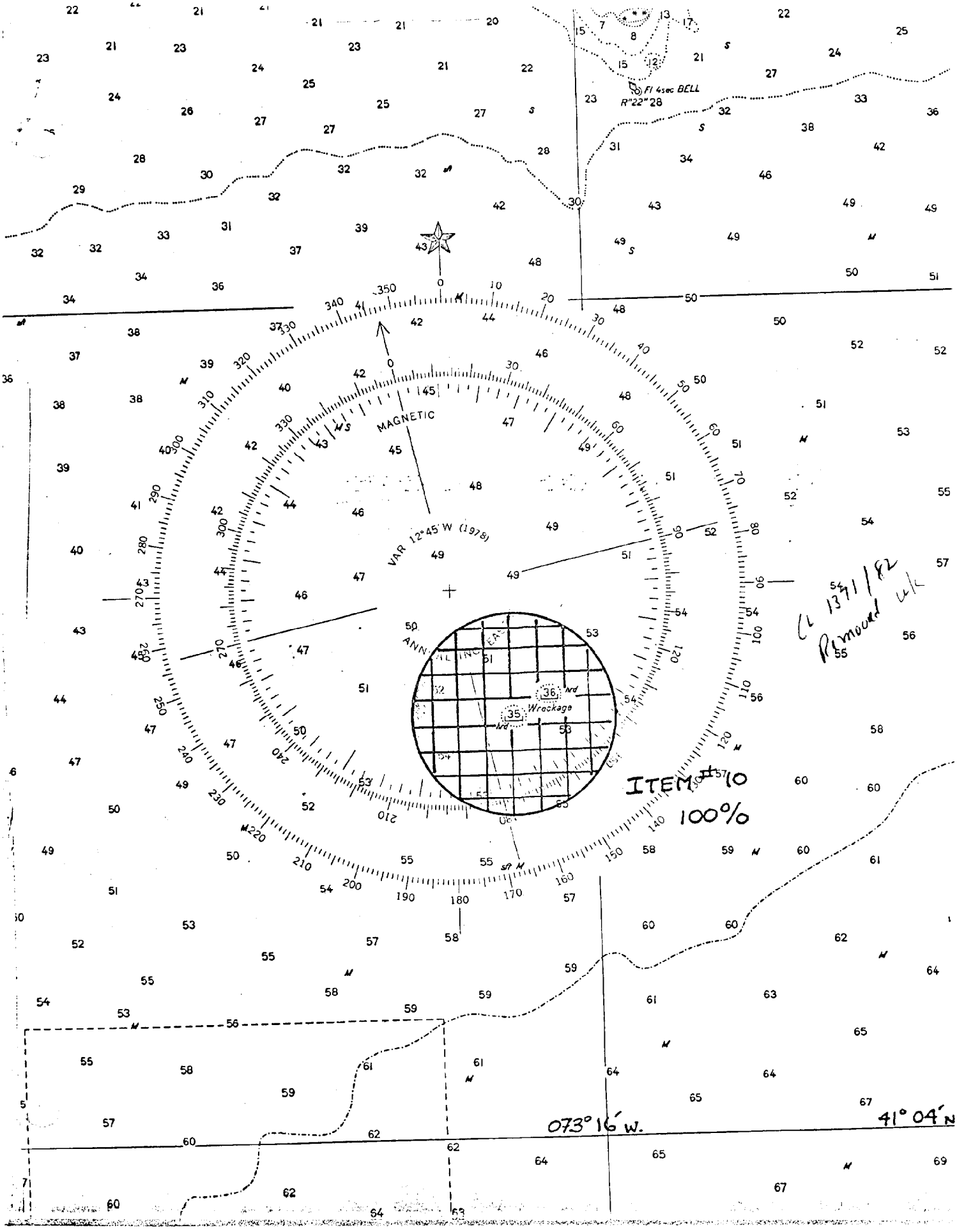


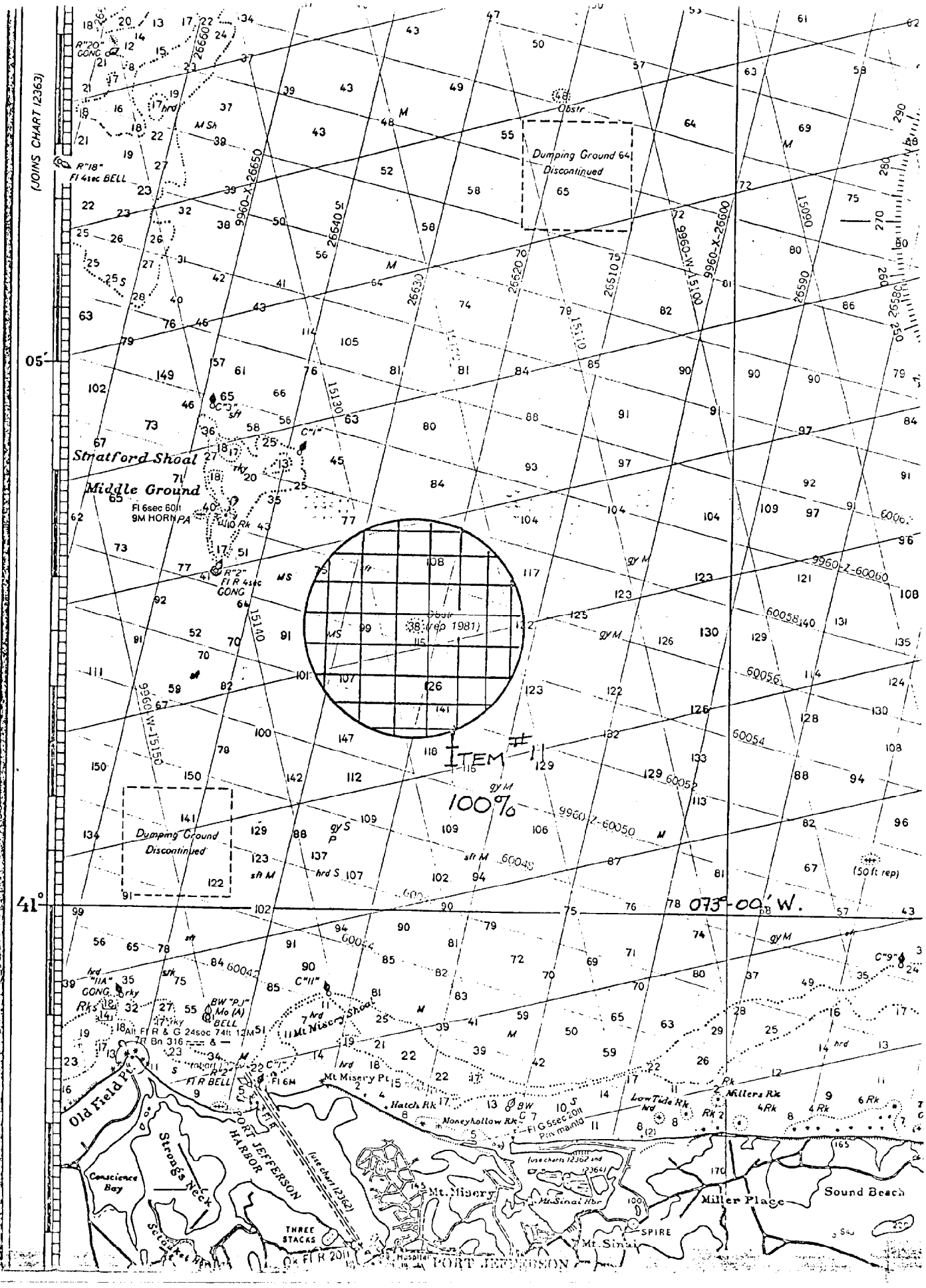
CAUTION

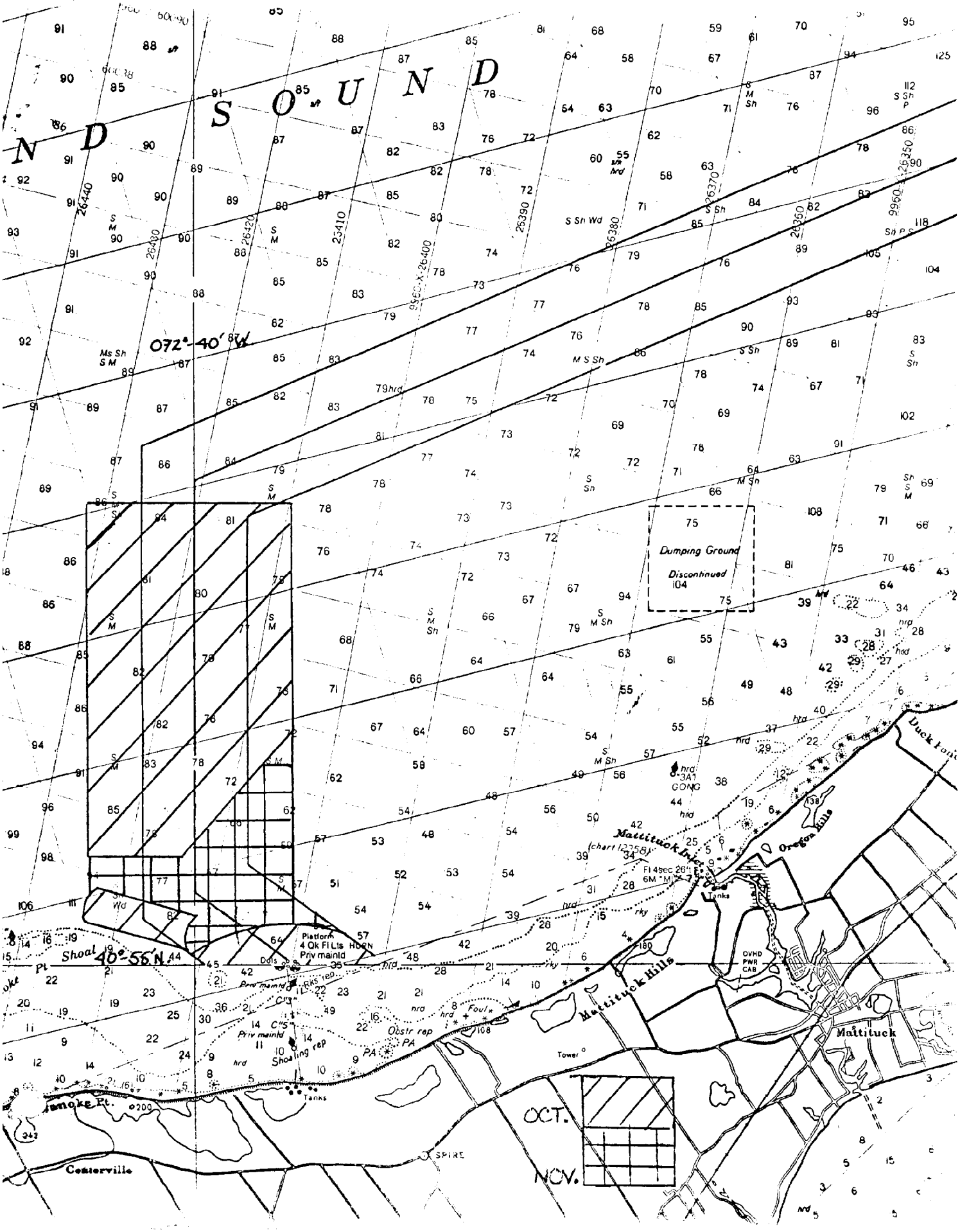
as been corrected from the Notice to Mariners
kly by the Defense Mapping Agency Hydro-
graphic Center and the Local Notice to Mariners
cally by each U.S. Coast Guard district to the
wn in the lower left hand corner.

This nautical chart has been designed to promote safe navigation. The National Ocean Survey encourages users to submit corrections, additions, or comments for improving this chart to the Director, National Ocean Survey, NOAA, Rockville, Maryland 20852.

FROM CHART
12354


Fl 4sec BELL
R"22"28
MAGNETIC
VAR 12°45' W (1978)
ANNUAL INCREASE
36
Wrkd
Wreckage
35
Wrkd
ITEM #10
100%
073° 16' W.
41° 04' N


(JOINS CHART 12363)
Stratford Shoal
Middle Ground
Fl 6sec 60ft
9M HORN PA
R"2"
Fl R 4sec
CONG
Dumping Ground
Discontinued
Dumping Ground 64
Discontinued
Obstr
(Rep 1981)
ITEM #11
100%
05'
41°
073°-00'W.
Old Field Pt
Conscience Bay
Strongs Neck
PORT JEFFERSON HARBOR
(use chart 12362)
Mt Misery Shoal
Mt Misery Pt
Hatch Rk
Moneyhollow Rk
Fl G 5sec 20ft
Pin mamd
Low Tide Rk
Millers Rk
4Rk
6Rk
(use charts 12362 and 12364)
Mt. Misery
Mt Sinai Hbr
Miller Place
Sound Beach
SPIRE
Mt Sinai
THREE STACKS
Oc Fl R 20sec
PORT JEFFERSON


SOUND
072°-40'W
40°-56'N
Dumping Ground
Discontinued
104
Platform
4 Qk Fl Lts HORN
Priv maintd
Shoal
Pt
Smoke Pt.
Centerville
Mattituck Hills
Mattituck
Mattituck Inlet
(chart 12358)
Oregon Hills
Duck Pond
Tanks
Tower
SPIRE
OCT.
NOV.
Obstr rep
PA
Foul
Shoaling rep
Priv maintd
OVHD PWR CAB
GONG

71°27'

71°26'

71°25'

41°20

66 Wk
(bow of the BLACKPOINT)

64 Wk
(stern of the BLACKPOINT)

41°19

FE-241WD
MASSACHUSETTS--CONNECTICUT
RHODE ISLAND SOUND & LONG ISLAND SOUND
20 TO 27 JULY 1982
SCALE = 1:20,000
N A 1927 DATUM
SOUNDINGS IN FEET AT MLLW
RESULTS OF THE INVESTIGATION OF ITEM 2
SHEET I OF 8

41°18

71°27'

71°26'

71°25'

71° 29'

71° 28'

71° 27'

41° 19'

48 Rk

41° 18'

52 Rk

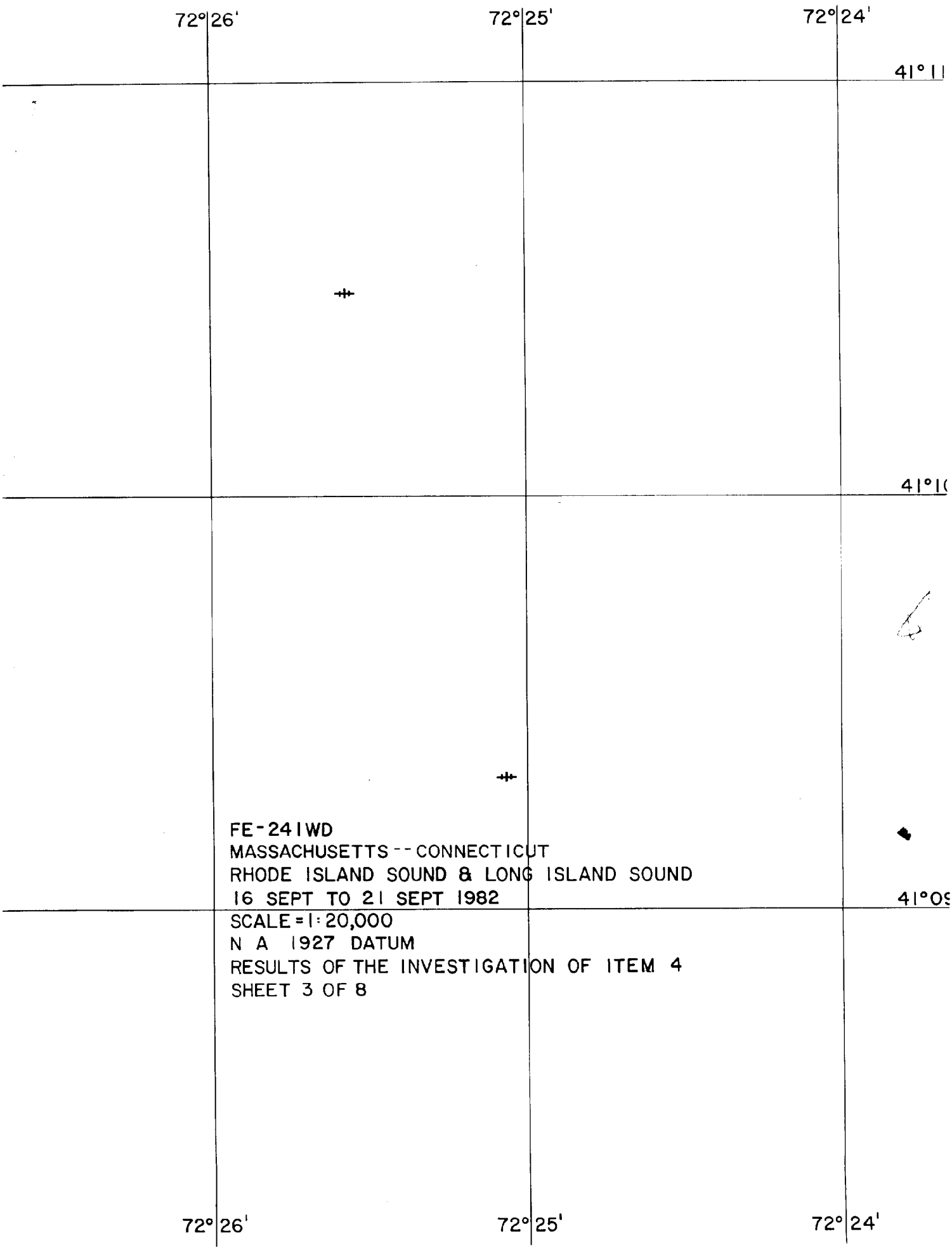
FE-241WD
MASSACHUSETTS--CONNECTICUT
RHODE ISLAND SOUND & LONG ISLAND SOUND
29 JULY TO 13 AUG 1982
SCALE = 1:20,000
N A 1927 DATUM
SOUNDINGS IN FEET AT MLLW
RESULTS OF THE INVESTIGATION OF ITEM 3
SHEET 2 OF 8

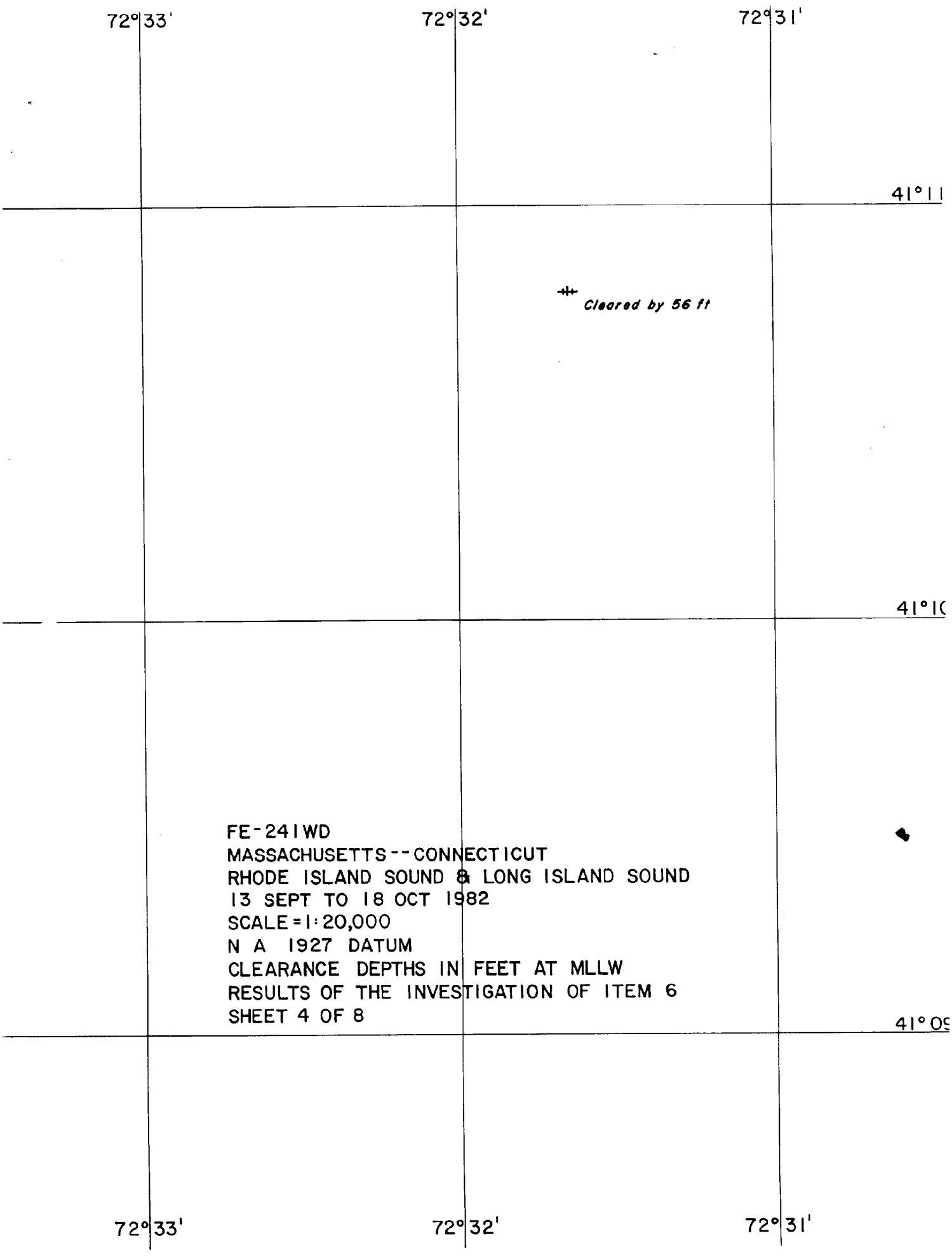
41° 17'

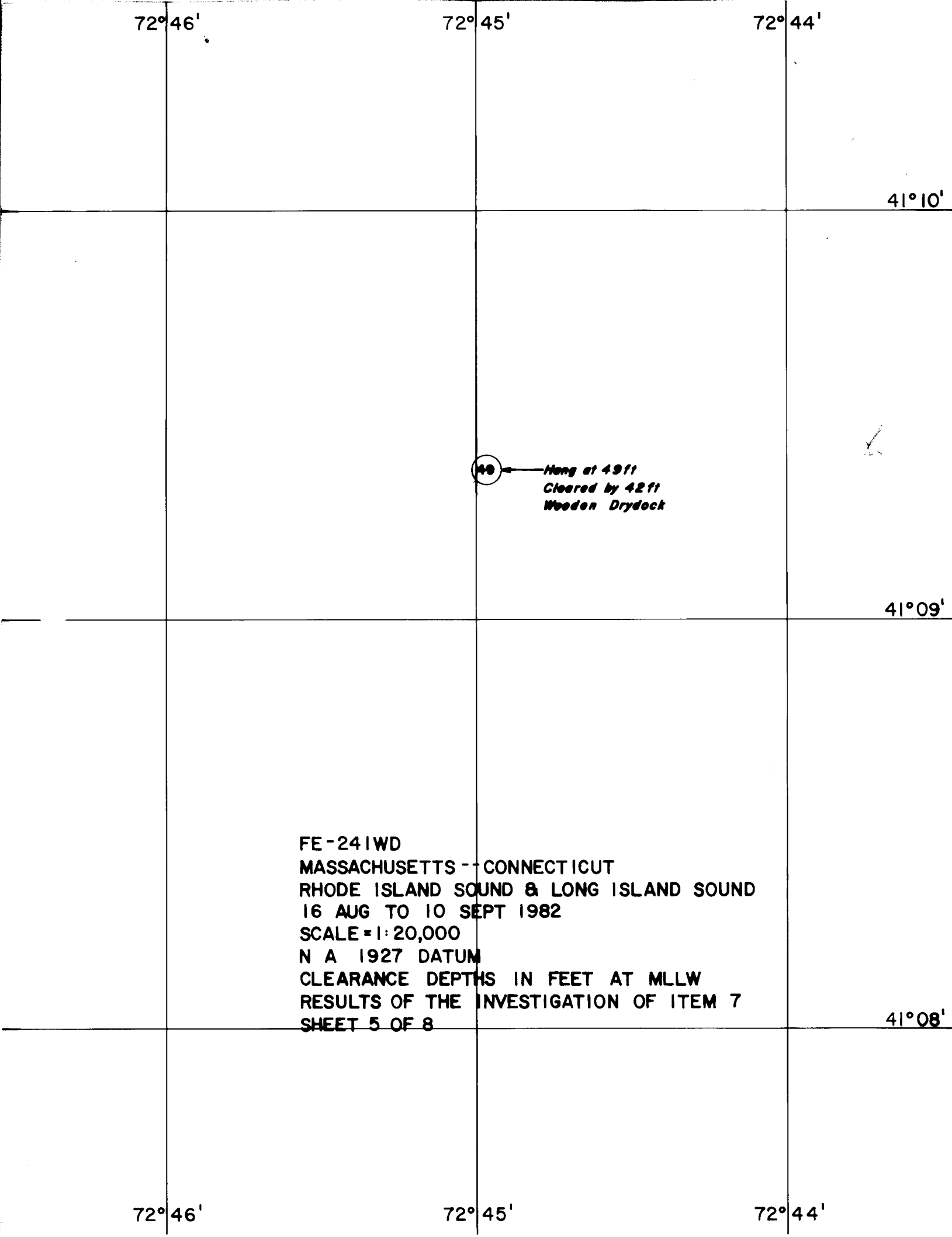
71° 29'

71° 28'

71° 27'


72° 26'
72° 25'
72° 24'
41° 11
41° 10
41° 09
FE-241WD
MASSACHUSETTS -- CONNECTICUT
RHODE ISLAND SOUND & LONG ISLAND SOUND
16 SEPT TO 21 SEPT 1982
SCALE = 1:20,000
N A 1927 DATUM
RESULTS OF THE INVESTIGATION OF ITEM 4
SHEET 3 OF 8
72° 26'
72° 25'
72° 24'


72°33'
72°32'
72°31'
41°11
41°10
41°09
Cleared by 56 ft
FE-241WD
MASSACHUSETTS--CONNECTICUT
RHODE ISLAND SOUND & LONG ISLAND SOUND
13 SEPT TO 18 OCT 1982
SCALE=1:20,000
N A 1927 DATUM
CLEARANCE DEPTHS IN FEET AT MLLW
RESULTS OF THE INVESTIGATION OF ITEM 6
SHEET 4 OF 8
72°33'
72°32'
72°31'



FE-241WD
MASSACHUSETTS -- CONNECTICUT
RHODE ISLAND SOUND & LONG ISLAND SOUND
16 AUG TO 10 SEPT 1982
SCALE = 1:20,000
N A 1927 DATUM
CLEARANCE DEPTHS IN FEET AT MLLW
RESULTS OF THE INVESTIGATION OF ITEM 7
SHEET 5 OF 8

72° 55'

72° 54'

72° 53'

41° 14'

25 Obstr (steel "I" beam)

41° 13'

FE-241WD
MASSACHUSETTS -- CONNECTICUT
RHODE ISLAND SOUND & LONG ISLAND SOUND
25 AUG TO 10 SEPT 1982
SCALE = 1:20,000
N A 1927 DATUM
SOUNDINGS IN FEET AT MLLW
RESULTS OF THE INVESTIGATION OF ITEM 8
SHEET 6 OF 8

41° 12'

72° 55'

72° 54'

72° 53'

73°00'

72°59'

72°58'

41°01'

Cleared by 64 ft
Schooner

41°00'

FE-241WD
MASSACHUSETTS--CONNECTICUT
RHODE ISLAND SOUND & LONG ISLAND SOUND
23 SEPT TO 1 OCT 1982
SCALE=1:20,000
N A 1927 DATUM
CLEARANCE DEPTHS IN FEET AT MLLW
RESULTS OF THE INVESTIGATION OF ITEM 9
SHEET 7 OF 8

40°59'

73°00'

72°59'

72°58'

73° 17'

73° 16'

73° 15'

o subm obstr

o subm obstr

41°05

o subm obstr

41°04

FE-241WD
MASSACHUSETTS -- CONNECTICUT
RHODE ISLAND SOUND & LONG ISLAND SOUND
29 SEPT TO 4 OCT 1982
SCALE = 1:20,000
N A 1927 DATUM
RESULTS OF THE INVESTIGATION OF ITEM 10
SHEET 8 OF 8

41°03

73° 17'

73° 16'

73° 15'

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

EXAMINED FOR NM
GDBU
DCH 6-7-90
LDH 6-7-90

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-241WD

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
13205	9/13/90	L. ARKENAU	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 53
12354	9/14/90	Russell P Remney	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 58
12372 E	9-26-90	K.R. Forster	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 28
12300	2-15-91	K.R. Forster	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 55
12363	2-26-91	John Pierce	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 51
12369	6-14-91	John Pierce	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 32
12358 N	6-26-91	Len Ackman	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 27 Partially SS/by FE 257 WD
13228	11-26-91	Peara Hunt	(Full) Part Before After Marine Center Approval Signed Via
			Drawing No. 19
12371 NW	3-5-92	John Barber	(Full) Part Before After Marine Center Approval Signed Via
			Drawing No. 28
13214	6-11-93	John Barber	(Full) Part Before After Marine Center Approval Signed Via
			Drawing No. 69

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED