

# H-9951 WIRE DRAG

Diagram No. 1211-3

NOAA FORM 76-35A

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

## DESCRIPTIVE REPORT

Type of Survey ..... Wire Drag  
Field No. .... R/H-10-1-80  
Office No. .... H-9951WD

### LOCALITY

State ..... Connecticut  
General Locality ..... Long Island Sound  
Locality ..... Approaches to New London  
Harbor .....

19 80

CHIEF OF PARTY  
CDR M.C. Grunthal

### LIBRARY & ARCHIVES

DATE ..... October 3, 1983

H-9951  
WIRE DRAG

HYDROGRAPHIC TITLE SHEET

H-9951 WD

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.

10-1X-80

State Connecticut

General locality Long Island Sound

Locality Approaches to New London Harbor

Scale 1:10000

Date of survey 4 Aug ~~29 Jul~~ -- 29 Aug 1980

Instructions dated 8 Jul 1980

Project No. S-B600-RU/HE-80

Vessel NOAA Ship RUDE (S590) and NOAA Ship HECK (S591)

Chief of party Cdr. Melvyn C. Grunthal, NOAA

Surveyed by Cdr M. C. Grunthal, Lt. Cdr R. S. Moody, Lt D. H. Peterson, Lt(jg) P. M. Connors, and additional temporarily assigned officers

Soundings taken by echo sounder, ~~hand lead,~~ pole pneumatic depth gauge

Graphic record scaled by \_\_\_\_\_

Graphic record checked by \_\_\_\_\_

Protracted by \_\_\_\_\_

*Manual smooth*

~~Automated~~ plot by M. B. Hickson

Verification by M. B. Hickson

Evaluation & Analysis by M. B. Hickson

Soundings in ~~XXXXX~~ feet at MLW ~~MLLW~~ based on predicted tides

REMARKS: Data removed from this report and filed with the survey records are noted on the Table of Contents.

STANDARDS CLK'D 10-2A-83

CLD

AWOIS ✓ RUD 11/2/83

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APPROVED TIDE NOTE*

\* = Data removed from the Descriptive Report and  
filed with the survey records.

Descriptive Report  
To Accompany  
Project S-B610-RU/HE-80  
East Coast Wire Drag Investigations  
Approach to New London Harbor

I. A. AUTHORITY

This project was authorized under Hydrographic Project Instructions S-B610-RU/HE-80, Wire Drag, East Coast Investigations, Approach to New London Harbor, Connecticut, dated 8 July 1980. ✓

B. CHARACTER AND LIMITS OF WORK

The project instructions called for a cleared effective depth of 40 feet or greater in the vicinity of a charted wreck, PD, located in the approach to the New London Harbor Channel. ✓

C. CONTROL - DEL NORTE STATIONS

During this survey, Del Norte electronic control was used exclusively. Two shore stations were established and located at the following positions:

R1 at Plant (USE)<sup>1932</sup>, - Avery Point, CT  
Lat. 41°18' 57.533"N ✓  
Long. 72°03' 59.985"W ✓

Connecticut Coordinates

X = 787, 721.68  
Y = 176, 597.45

~~C.R.F. North Hill, 1943~~  
R2 at ~~North Hill (1943)\*~~ - Fishers Island, NY  
Lat. 41°16' 23.643"N ✓  
Long. 72°01' 28.313"W ✓

Connecticut Coordinates

X = 799, 426.14  
Y = 161, 116.99

\*Please note that <sup>C.R.F.</sup>North Hill (1943) was used - another station, North Hill (1934), is easily confused with <sup>C.R.F.</sup>North Hill (1943).

To meet the Del Norte line of sight requirements, it was necessary to mount the Del Norte master on the port yardarm of the ships - approximately 30' above the waterline. This is felt to have contributed to the creation of several small "null zones" within the survey area. In addition, larger "null zones" also existed to the east and the west of the survey area. Although the "null zones" outside the survey area made the wire drag diffi- ✓

cult to set out and the "null zones" inside the survey area sometimes caused the loss of one of the Del Norte rates, the accuracy of the survey was not degraded.

#### D. SHORE SIGNALS AND CALIBRATIONS

Baseline calibrations on all Del Norte units used during this survey were accomplished both prior to and after survey operations between New London Harbor Lighthouse and Plant (USE). New London Harbor Lighthouse and Plant (USE) are both located near the water and are 1975 meters apart, therefore providing an excellent baseline calibration. Daily correctors were obtained by circle calibrating the ships around New London Ledge Lighthouse which was located just to the north of the project area. When equipped with Del Norte the launches were calibrated via three point visual fixes. The following objects were used for baseline calibrations, circle calibrations and three point fixes. Note: all X, Y coordinates are Connecticut coordinates.

##### Baseline Calibration

Plant (USE), <sup>1932</sup> - Avery Point, CT  
See above

New London Harbor Lighthouse, <sup>1835</sup>  
Lat.  $41^{\circ}18' 59.48934''N$  ✓      X = 781, 243.97  
Long.  $72^{\circ}05' 24.85457''W$  ✓      Y = 176, 745.12

##### Circle Calibration

New London Ledge Lighthouse, <sup>1932</sup>  
Lat.  $41^{\circ}18' 20.79446''N$  ✓      X = 784, 657.77  
Long.  $72^{\circ}04' 40.51608''W$  ✓      Y = 172, 854.96

Bearings Observed:  $129.63^{\circ}$  and  $309.63^{\circ}$  for R1  
 $218.92^{\circ}$  and  $038.92^{\circ}$  for R2

R1 Distance = 1474 meters  
R2 Distance = 5750 meters

##### Three Point Fix Calibration

New London Harbor Lighthouse, <sup>1835</sup>  
See above

Fort <sup>Black</sup>  
~~Ft.~~ Trumbull ~~(USE)~~ Tank, <sup>1947</sup>  
X = 780, 273.89      Lat.  $41^{\circ} 20' 37.470''$   
Y = 186, 654.78      Long.  $72^{\circ} 05' 36.580''$

~~Avery Point Tank (8 legged tank)~~ GROTON CG TRNG STA TANK, 1943  
X = 788, 142.88      Lat.  $41^{\circ}19' 10.866''$   
Y = 177, 950.28      Long.  $72^{\circ}03' 54.325''$

LIGHT, 1954  
 Avery Point ~~Lighthouse~~ (abandoned)  
 X = 788, 432.96      Lat. 41° 18' 54.560"  
 Y = 176, 302.18      Long. 72° 03' 50.695"

E. DATES OF SURVEY

The ships arrived in New London on 29 July 1980 and commenced wire drag operations on 4 August 1980. Wire drag and diving operations were completed on 28 August and the ships departed New London on 29 August.

F. TIDE REDUCERS - *See the Approved Tide Note included in this report.*

Field processing of each day's data was accomplished using predicted tides for the reference station at New London State Pier, Connecticut, with the following correctors applied:

<u>High Water</u>	<u>Low Water</u>	<u>Ratio</u>
+6 min.	-12 min.	0.95

G. JUNCTIONS AND SPLITS

None.

H. INCOMPLETE ITEMS

None, the project was completed as described by the project instructions.

I. CURRENTS AND WINDS

No unusual currents or winds were noted during this project. The east/west tidal currents were steady and predictable except near the mouth of the Thames River where the ships were likely to get set to the north or south, depending on the state of the tide.

J. DIVING OPERATIONS

Diving operations were conducted only on the 3<sup>8</sup>' uncharted shoal (see Attachment H), discovered on C Day. Prior to diving the RUDE had conducted a fathometer search at 10 meter spacing over the shoal and placed a marker buoy at the position of the shoalest depth found during the search. The ships anchored about 100 meters from the marker buoy and the divers deployed at slack water from a launch tied off to the marker buoy. The shoal, <sup>submerged</sup> a rocky ledge, was then investigated and a number of pneumatic depth gauge depths were taken on the ledge. The marker buoy weight was moved to the shoalest point and a Detached Position was recorded from the launch with the marker buoy line vertical. Water visibility was good (10' to 15') and the shoal (approximately 15' wide by 40' long) was investigated by a 100' radius circle search with the search line tied off to the marker buoy weight.

*RK added to A&D Sheet.*

The pneumatic depth gauge had previously been calibrated on 25 July 1980 and was found to be accurate within 0.5' at this depth.

#### K. TESTING

Testing results were recorded in both the rough and smooth tester volumes. The rough tester records show the actual depth of the ground wire mark on the tester pole after pick-up of the drag tester. The smooth tester volume shows the actual ground wire lift or sag as corrected to the upright length.

##### Definitions:

(1) Lift: The difference between wire depth and the length of the upright when the wire depth is less than the length of the upright.

(2) Sag: The difference between wire depth and the length of the upright when the wire depth is greater than the length of the upright.

(3) Miss: A test of the wire in which, for any reason, the tester pole fails to show evidence of being struck by the wire.

(4) Sag Miss: A test of the wire in which the tester pole fails to show evidence of being struck by the wire because the wire has, with certainty, passed beneath the tester pole.

(5) TOB: "Tester On Bottom." A test of the wire in which the tester rod shows signs of having touched the ocean floor. Such a test is rejected because of the uncertainty of the accuracy of the results of the test.

#### L. EQUIPMENT

Standard RUDE and HECK wire drag equipment and techniques were used for this project, with two exceptions. First, toggles were placed on the towlines every 50' instead of the normal 100'. This kept the towlines from sinking during setout and hanging on the bottom. The lifting effect on the end weights seemed to be negligible. Second, launch drag techniques used during the New York Project, OPR-B645-RU/HE-80, earlier this field season, were used to clear a small area at the extreme northern edge of the project area. The following is a general description of these techniques:

The system as used by the RUDE and HECK, is a modification of the English Constant Tension System as described in the ADMIRALTY MANUAL OF HYDROGRAPHIC SURVEYING, VOLUME TWO, CHAPTER 4, Sweeping and Diving, Part 3, 1969. The RUDE and HECK system differs from the English System in 3 basic areas: (1) The RUDE and HECK used launches under power, dragging, rather than drifting through the water using little or no power; (2) An

electrically powered motorized fishing reel was used to maintain tension in the sweep line instead of the Owen automatic tensioning winch; and (3) KEVLAR line was used instead of piano wire for the sweep line. The RUDE and HECK's 20' launches were rigged with davits, blocks, weights, and winches to deploy the Kevlar sweep line under tension at a predetermined depth below the surface of the water (See Figure 1). Horizontal control was provided by Del Norte mounted in the launches, and the rates were manually recorded in Wire Drag Logs and plotted on boatsheet overlays. The depth of sweep line was determined in the following manner: The depth of the end weight was taken by pneumatic depth gauge at each fix. In addition, the depth of the center of the line was tested by standard wire drag tester techniques as often as possible and the shoalest of the two depths was used to determine lift. In most cases the center of the line sagged below the depth of the end weights and therefore the depth of the end weight was used to determine the wire lift.



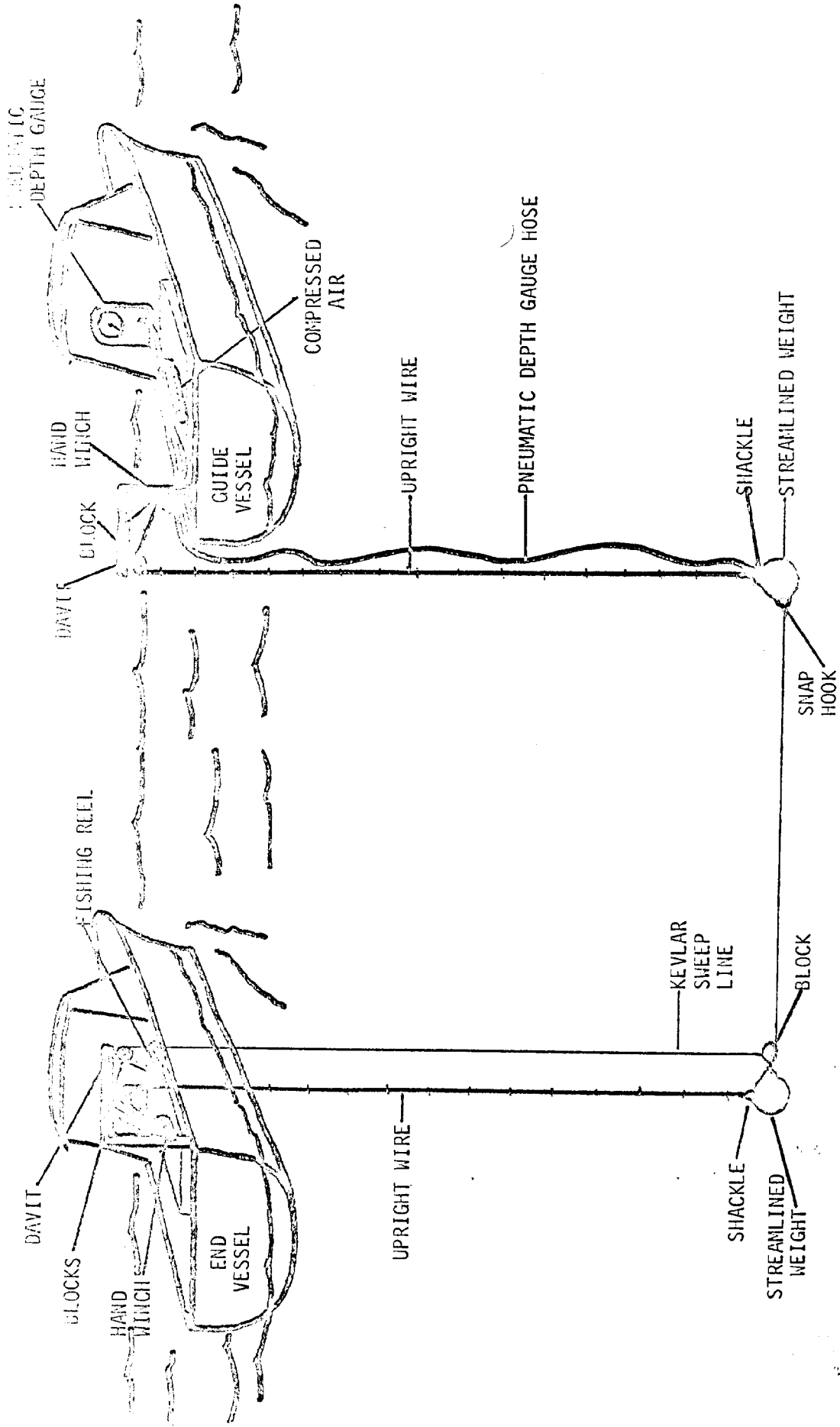


FIGURE 1

M. GENERAL NOTES

Although covering a relatively small area for ship drag operations, this project was quite difficult to drag to 40' or deeper because of the shoal water to the east of the project area, the 36' shoal to the south, the 39' <sup>submerged</sup> rocky ledge discovered at the western edge of the circle and the east/west currents. In addition, a large number of lobster pots were deployed to the east and southeast of the project area and in the southern portion of the project area. These lobster pots increased the difficulty of the project and caused the rejection of part of all of several drags. During any future operations in this area the Command would be well advised to coordinate with local and State authorities prior to arrival in the area to insure that no lobster pots were in their operational area.

A somewhat disquieting feature of the 39' <sup>8</sup> shoal found at the western edge of the position was that, although it was hung from the west, ~~two~~ <sup>one</sup> valid drag~~s~~ from the east to the west passed over the shoal without hanging. Both ~~these~~ <sup>the</sup> drag~~s~~ had been well tested and <sup>was</sup> were shown to have a deeper effective depth than 39'. The only explanation which this command can offer is that the predicted tides were incorrect or that the wire slipped over the hang which was relatively smooth on the eastern side. - see the Evaluation Report - Section 5.

Because of the "null zone" mentioned in Section C, the R1 rate was lost for the following positions:

B Day  
HECK - Position 7  
RUDE - Position 14

D Day  
HECK - Position 20

J Day  
HECK Position 10

Based on the Line of Position from the R2 rate and the distance and bearing to the other ship, an R1 rate was calculated and this rate was used for determining the ship and buoy positions.

Daily Operations:

A-Day: Three drags were attempted on this day; however, due to lobster pots and towline hangs no valid data was obtained.

B-Day: Two drags were attempted and again lobster pots created problems. On the first drag some valid data was obtained covering the southwestern portion of the position circle.

C-Day: The one drag on this day hung at the edge of the position circle. A 39' foot shoal was discovered by this hang in a charted area of 48 feet. Diver investigation of this area was accomplished on P-Day.

D-Day: Two drags were completed with parts of both considered valid for charting purposes.

E-Day: One drag was attempted; however, only the first five positions were salvaged due to Del Norte problems encountered on the HECK.

F-Day: Three drags were attempted with only a small portion of Strip 1 considered valid. High lifts and lobster pots caused severe problems throughout the day.

G-Day: One drag was run covering the northern portion of the position circle. The drag ran smoothly although it did clear the hang from C-Day at 40 feet effective. This probably occurred since the drag was from the opposite direction (than C-Day) and the wire just slipped over the shoal.

H-Day: All data collected this day was rejected.

J-Day: Two drags (out of four attempted) were considered valid, with Strip 1 covering a holiday and Strip 2 grounding out on the 36' shoal in the southern section of the position circle.

K-Day: Two drags on the 36 foot shoal to the south were accomplished. The first at an effective depth of ~~over 40~~<sup>30-40</sup> feet and the second obtained greater coverage at 35 1/2 feet effective.

L-Day: Two drags were accomplished this day, which completed ship drags on this project. The first drag covered some holiday areas and was intentionally grounded. The second drag cleared the 36 foot shoal area (at the south) to ~~34 1/2~~<sup>34 1/2 - 35</sup> feet.

M-Day: Detached positions on all buoys within the survey area were taken.

N-Day: Three launch drags were run from the south to the north just outside the river entrance where the ships could not maneuver. It was intended that the drags would run with the current till they grounded out. The drags accomplished their purpose; however, the additional coverage obtained was less than anticipated.

P-Day: Diving operations were conducted which obtained a solid position and least depth on the shoal discovered on C-Day.

#### N. MISCELLANEOUS

The only major discrepancy with prior surveys was the uncharted shoal previously discussed from C-Day. The charted depths were generally in good agreement with depths observed throughout the survey, although it appeared that there might be some slight shoaling in the southeastern portion of the position circle, probably from run-off from the Thames River.

O. PERSONNEL

The officers participating in this survey were: CDR Melvyn C. Grunthal, LCDR Richard S. Moody, LCDR David W. Yeager (temporarily), LT David H. Peterson, LTJG Peter M. Connors, LTJG Gary Barone (temporarily), LTJG Gregory DeSilva (temporarily) and LTJG Robert X. McCann (temporarily).

P. APPROVAL

All shipboard records of this item investigation are hereby approved. All field work was personally supervised by the undersigned. The boatsheet, overlays and field records were inspected daily. This survey is considered complete and adequate for charting purposes.

*Richard S. Moody*

*FOR*

M. C. Grunthal  
Commanding Officer  
NOAA Ships RUDE and HECK

## II. A. STATEMENT ON ITEM 1

This PD item originates with Local Notice to Mariners 48 of 1970. The item is described as the 36' cabin cruiser, Lazy Days, which burned and sank in about 43' of water in approximate position 41°17'24"N, 72°04'42"W. During December of 1970 the Corps of Engineers conducted a 1/2 square mile search for the vessel and failed to locate it. During November of 1978 the NOAA Ships RUDE and HECK conducted a side scan sonar search of the area, but detected no obstructions which could be interpreted as the wreckage of a 36' cabin cruiser.

## B. GROUNDINGS AND HANGS

Because of the shoal water to the east and north of the project area, the 36' shoal in the southern part of the project area, the 38' shoal discovered on the western edge of the project area and the prevailing east/west currents, a number of drags had to be set out to intentionally ground out. During the first few drags we had several hangs during setout. This problem ceased when toggles were placed every 50' on the towline, instead of every 100', thus preventing the towline from sagging and hanging the bottom.

Only three unintentional hangs occurred. The first was on "C" Day, a solid hang which occurred prior to getting a complete round of wire depth tests. This hang was later resolved by fathometer search and diver investigation and was found to be the aforementioned 38' <sup>submerged</sup> uncharted, rocky ledge in 48' of water. The second unintentional hang was made during pick-up of the wire after the first drag on "F" Day. This hang was well outside the project area and it is likely that the wire hung on the rocky bottom when tension was taken off the wire during pickup and the wire sagged to the bottom. A fathometer search was made of the area after pickup, but no indication of an obstruction or shoaling was found, the water depths in the area being near 70'. The third unintentional hang occurred during the third drag on "K" Day. The drag was proceeding smoothly with an effective depth of 40' ~~72'~~ until position 21 when the wire temporarily hung between Buoys 2 and 3 in an area previously cleared to ~~40-72'~~ 41'. An analysis of the section tests showed that section 2-3 showed no lift (i.e., the depth of the wire in section 2-3 was 42' ~~72'~~) and it is felt that section 2-3 was deep enough to hang something on the bottom. <sup>Charted</sup> depths in this area ~~range from 43' to 45'~~ <sup>are</sup>. The drag was rejected because of the temporary hang and the same area was dragged on "L" Day with no signs of a hang. - See the Evaluation Report - Section 5.

## C. NOTED OCCURENCES DURING THE SURVEY

A 38' <sup>submerged</sup> uncharted shoal (a rocky ledge) was found in 48' of water (charted). The shoal did not hang from the east, but only from the west.

## D. SUMMARY AND RECOMMENDATION

The project item, listed as a wreck PD in the approach to the New London Harbor channel, was not disproved due to the rough bottom topography,

however, the project area was cleared to in excess of 40 feet except at:

- . An approximate 900' radius shoal area, marked 36', centered at 41°16.45'N, 72°04.45'W, which was cleared to 34' ~~72'~~ effective.   
*submerged*
- . A rocky ledge, previously uncharted, at 41°16.96'N, 72°05.87'W, southeast of Rapid Rock, upon which diving operations were conducted and a least depth of 34' feet (corrected for ~~predicted~~ *smooth* tides) was found, using a pneumatic depth gauge.

It is recommended that the charts affected - 12354, 12372, and 13212 - be tinted green over the dragged area to indicate clearance of 40 feet minimum, except for the shoal area at 41°16.45'N and 72°04.45'W, which should be shown as cleared to 34 feet and the ledge at 41°16.96'N, 72°05.87'W, to 34 feet. - *See the Evaluation Report - section 5.*

STATISTICS

<u>Date</u>	<u>Day Letter</u>	<u>Strip</u>	<u>Vol. No.</u>	<u>Positions</u>	<u>LNМ</u>	<u>SNM</u>	<u>Length of Drag</u>
8/8	B	1	I	19	2.0	1.0	3200
8/13	D	1	I	10	2.8	1.39	3600
		2	I	13			3200
8/14	E	1	I	5	0.4	0.2	3200
8/15	F	1	I	10	1.5	0.68	3200
8/18	G	1	II	13	1.6	0.72	3000
8/20	J	1	II	8	1.7	0.74	3200
		2	II	7			3200
8/22	K	1	II	7	3.4	1.45	3200
		2	II	6			3200
		3	II	5			2400
8/25	L	1	II	10	2.3	0.9	2400
		2	II	6			3200



U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SURVEY

August 18, 1980

To: Director, NOS  
Attn C3

Thru: Director, AMC  
Attn CAM1

From: *MC [Signature]*  
Commanding Officer  
NOAA Ships RUDE and HECK

Subj: Danger to Navigation Report

An uncharted shoal, possibly a ledge, covered by approximately 38 feet of water (reduced for predicted tides) has been discovered during wire drag operations on S-B610-RU/HE-80. The charts affected are: 12354, 12372, 13212. The position thus far determined, following completion of several sounding lines at 10 meter (Del Norte) spacing is: 41° 16.96' N; 72° 05.87' W. The feature was further plotted at position 213° T, 1.65Nm (3055 meters) from New London Ledge Lighthouse (USCG Light List No. 1005).

*Chart  
38Rk as show  
on the present  
survey.*

At the earliest opportunity prior to completion of S-B610-RU/HE-80, diving operations will be conducted at the above position to further characterize the nature of the feature and to obtain a least depth using a pneumofathometer. A wire drag clearing strip will be undertaken should the diving operation fail to produce acceptable results *pneumo depth gage*

The presence of this uncharted feature was reported to the U.S. Coast Guard, Group Long Island Sound (New Haven, CT) at 2340 CUT 12 August 1980, via VHF marine radiotelephone, Channel 66.

Attachment H



H. CHART CORRECTION (Cont'd)

2. The following information updates a danger to navigation report passed to the USCG Group, Long Island Sound, on VHF-FM CH66 at 2340Z, 12 August 1980, and should be published in a Local Notice.

"The National Ocean Survey reports that an uncharted ledge (rock) has been discovered at Lat  $41^{\circ}16.96'N$ , Long  $72^{\circ}05.87'W$ , and is covered by 39 feet of water (reduced for predicted tides). The position of this ledge is  $213^{\circ}T$ , 1.65 nm from New London Ledge Lighthouse (LL No. 1005). Charts affected are: 12354, 12372, and 13212."

38 ft. (smooth tides)

PNEUMATIC DEPTH GAUGE CALIBRATION

SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Least depths were taken using a Roylyn <sup>Depth gage</sup> Model 25546-23B14-HDD precision depth gauge configured as a Pneumo ~~Fathometer~~, S/N 784996. The Manufacturer's specified accuracy of this gauge is 1/4 of 1% over the range of 230', or 0.58'. This accuracy was verified by comparison with a lead line from 2' to 40' and back to 2', by 2' increments. The greatest variance from the leadline depth was 0.8'. This occurred 3 times. The average variance of the 40 comparisons was 0.42', with the Pneumo ~~Fathometer~~ <sup>Depth gage</sup> indicating a shoaler depth in all cases. The comparison was made on 25 July 1980 and is shown below. No corrections are deemed necessary since the depths were determined by water pressure. Each depth in the sounding volume is an average of 2 or more readings.

<u>LEADLINE</u>	<u>PNEUMO DOWN</u>	<u>PNEUMO UP</u>	
2'	1.5'	1.5'	Greatest Variance 0.8'
4'	3.5'	3.9'	
6'	5.6'	5.8'	
8'	7.8'	7.6'	Average Variance 0.42'
10'	9.6'	9.8'	
12'	11.7'	11.9'	Manufacturers Specification Accuracy to be within 1/4 of 1% over the range of 230' or 0.58'
14'	13.8'	13.7'	
16'	15.7'	15.5'	
18'	17.7'	17.8'	
20'	19.7'	19.5'	
22'	21.3'	21.5'	
24'	23.2'	23.6'	
26'	25.4'	25.3'	
28'	27.5'	27.7'	
30'	29.2'	29.5'	
32'	31.6'	31.5'	
34'	33.6'	33.7'	
36'	35.7'	35.8'	
38'	37.3'	37.5'	
40'	39.2'	39.6'	

Taken on 25 July 1980

<sup>depth gage</sup>  
Pneumo ~~Fathometer~~ Calibration, Roylyn Model 25546-213B14-HDD  
S/N 784996



U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SURVEY

NOAA SHIPS RUDE & HECK  
439 West York Street  
Norfolk, VA 23510

Dr. James Baird  
University of Connecticut  
Avery Point  
Groton, CN 06340

Dear Dr. Baird,

As per our conversation of 23 June, the Commanding Officer of the NOAA Ships RUDE and HECK (to which I am assigned) requests permission to occupy the geodetic marker "Plant" (USE) on the University's grounds at Avery Point.

The ships will be conducting a hydrographic survey between Fishers Island and the mainland commencing on or about 28 July and lasting approximately one month. The occupation of the site would consist of a tripod, an electronic reflective device, and two 12-volt car batteries. The batteries would have to be changed once a week. Normally, power is supplied via an indoor or outdoor electrical outlet, and this would be preferable if it could be arranged.

After talking with you, it appears there are no objections as far as you are concerned, however, I wanted to better describe the extent of our intrusion. If there are any further questions or concerns, I can be reached through the above address, or I will be available when we arrive next month. The National Ocean Survey thanks you and I wish you a very pleasant summer season.

Respectfully,

Peter M. Connors, LTJG, NOAA

Attachment J

June 30, 1980


LTJG Peter M. Connors  
NOAA SHIPS RUDE & HECK  
439 West York Street  
Norfolk, Virginia 23510

Dear Lt. Connors:

Permission is hereby granted to NOAA ships  
RUDE & HECK to occupy the geodetic marker "Plant" (USE)  
on University grounds commencing on or about July 28, 1980.  
Upon arrival on campus, please contact Mr. Richard Dyer,  
Director of the University Physical Plant, who will pro-  
vide an electrical connector to the site for your use.

We are happy to cooperate with NOAA in this  
project. Please contact me if we can be of any further  
assistance.

Sincerely,



James L. Baird, Jr.  
Director

JLB:d

cc: Richard Dyer  
Lt. James Scroggins

Attachment K



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

Date: 22 Oct 1980

To: Commander, Submarine Group Two  
U.S. Naval Submarine Base  
New London, CT

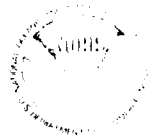
From: CDR Melvyn C. Grunthal  
Commanding Officer

Subj: Information; forwarding of

Enclosed is a hand plotted copy of the "A" and "D" sheet for the area south of the New London Channel Entrance, wire dragged by the NOAA Ships RUDE and HECK during the month of August 1980. As per our telcon of 22 October 1980, please note that this is a preliminary sheet which has not been verified and the depths shown are based on predicted tides. This preliminary sheet is provided for informational purposes only and should not be used for navigation.

Please address any questions about this preliminary sheet to:

Commanding Officer  
NOAA Ships RUDE & HECK  
439 West York Street  
Norfolk, VA 23510



Attachment L



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

Date : 1 Oct 1980

Reply to Attn. of:

To : General Counsel

Thru: Director, Atlantic Marine Center

From : CDR Melvyn C. Grunthal *Melvyn C. Grunthal*  
Commanding Officer

Subject: Claim by Mr. Manuel Maderia against the U.S. Government involving  
destruction and loss of lobster pots in New London, CT area

Chronology of Events

29 July 1980 -

The RUDE and HECK arrived at the Naval Underwater Systems Center in New London, CT.

30 July 1980 -

At 1430 EDT the following message was passed to the U.S. Coast Guard Group, Long Island Sound via FM radio for inclusion into the local safety broadcast twice daily by the USCG:

"The National Ocean Survey advises that the NOAA Ships RUDE & HECK will commence wire drag survey operations in the approaches to New London Harbor on 31 July 1980. Operations are expected to continue for approximately 2 weeks. The RUDE and HECK are 90-foot white hulled survey vessels. During survey operations, a 1/4" stainless steel wire, up to 8,000 feet in length and marked by buoys, will be suspended between the ships. Two small boats will also be in attendance. Diving operations are anticipated during the survey. All vessels are requested to make bridge-to-bridge contact via VHF-13 for safety and passing information."

31 July 1980 -

LT(JG) Connors spoke to the President of the Fishers Island Fishermen's Association about the RUDE and HECK drag operations while on Fishers Island. The President of the Association stated that the bottom over most of the area in which drag operations were to be conducted was muddy, not good for lobstering, and that it was very unlikely that any lobstermen from Fishers Island would be working in the area.

Attachment M

4 August 1980 -

During reconnaissance of the drag area a large number of lobster pots were found in the southern portion of the drag area. A lobster boat working in the area was contacted via bridge radio and the operator's name and phone number was obtained. Because of the lobster pots in the area, a drag was attempted near Rapid Rock rather than in the southern portion of the project area as originally planned. That evening the lobster boat operator, Mr. Maderia, was contacted and the ships' mission was explained. The general limits of the drag area were given to Mr. Maderia as follows (see enclosed chartlet): a 1 1/4nm radius circle centered on the "PD" wreck symbol 0.6nm south of the entrance buoys to New London Channel, bounded (approximately) on the west by Rapid Rock and on the south by the White/Orange "NL" buoy. Mr. Maderia stated that he had two sets of 14 pots each in the area and his cousin had one set of 5 pots. He also stated that he would be removing the sets within the next few days. At this time he was invited to visit the ship in order to better understand the project.

6 August 1980 -

Another drag was attempted near Rapid Rock since lobster pots were still present in the southern portion of the project area.

8 August 1980 -

For the first time drags were attempted in the southern portion of the circle in the area of the lobster pots. Two drags were attempted. A number of lobster pots were hung causing rejection of the majority of the first drag and all of the second drag. LT Peterson and LT(JG) Barone went to the Fishermen's Association in Stonington in an attempt to determine if any other lobstermen had pots set in our operating area.

12 August 1980 -

Another drag was attempted in the Rapid Rock area after finding a large number of lobster pots in the southern portion of the position circle. When we were checking for lobster pots, Mr. Maderia contacted the ship and I made arrangements to meet Mr. Maderia at his boat in Stonington. At approximately 8:00 PM I met with Mr. Maderia and again explained the ships' operations and showed him Chart 13212 of the New London area with the drag area marked on the chart. He stated that he did not have a chart of the area. He also stated that he would be removing his lobster pots in a few days.

13 August 1980 -

Two drags were attempted on this date in the southern portion of the circle in the general area of the lobster pots. A lobster pot fouled the drag near the #5 buoy and is felt to have caused the drag to hang on the bottom, necessitating rejection of the drag.

14 August 1980 -

A drag was made from the southeastern edge of the drag area to the northwestern edge. No lobster pots were seen.

15 August 1980 -

Three drags were attempted on this date in the southern portion of the drag area. The second and the third drags were rejected because of excessive lifts. It is almost certain that the excessive lift in section 3-4 of the wire during the third drag was caused by a lobster pot fouled in that section. The excessive lifts during the second drag may also have been caused by lobster pots.

18 August 1980 -

A drag was made in the northern part of the drag area. No lobster pots were encountered.

19 August 1980 -

Two drags attempted. No lobster pots were encountered in area of drag.

20 August 1980 -

Four drags were attempted on this date. Lobster pots were present in the drag area. High lifts resulting in rejection of the first drag may have been caused by these lobster pots.

21 August 1980 -

Four drags were also attempted on this date. Lobster pots were seen during the second drag and a number of pots were found fouled in the wire when it was retrieved. A portion of this drag had to be rejected, probably because of the effect of the lobster pots on the drag.

22 August 1980 -

Two drags were made on this date. There were no problems with lobster pots on either of these drags.

There is no question that wire drag operations by the RUDE and HECK destroyed or caused the loss of some of Mr. Maderia's lobster pots, floats and line. There is a question, however, as to whether Mr. Maderia attempted to remove the pots in good faith. The Local Notice to Mariners Safety Broadcast was scheduled to begin on 31 July. Mr. Maderia was personally contacted by telephone on 4 August and the area of operations explained. He stated to me that they had relatively few pots in the area and would have them removed within a few days. Operations in the area of the lobster pots



were suspended until 8 August when two drags were attempted and lobster pots encountered. Operations in this area were again suspended until 13 August when lobster pots again fouled one of the drags. During this time I did not observe Mr. Maderia removing pots from the area until 12 August. Additionally, we continued to hang lobster pots until 21 August, even though Mr. Maderia said that he would have all his pots removed within a few days of August 4. A total of 5 drags had to be totally or partially rejected because lobster pots fouled the wire. Fouled lobster pots may have also caused two other drags to have been rejected. This was equivalent to about 5 days of project time at a daily operating cost of approximately \$4,000.00 for the ships.

Two other possible inconsistencies should be noted. First, Mr. Maderia stated to me that the area in which the RUDE and HECK were dragging was not his primary area of operation. He said that he operated primarily out in the Race and that he worked the area of the drag operations only when he could not work in The Race. Second, the President of the Fishermen's Association of Fishers Island stated that the portion of the drag area in which Mr. Maderia had his pots set was a muddy bottom and was not a good area for lobstering.



# H-9951 WD

FLOATING AIDS TO NAVIGATION - Located by Launch 1275 on 26 Aug. 1980

Frank Ledge Buoy <sup>1</sup> (BR C) (Pos# 1M)	Lat. 41° 18' 40.6" Long. 72° 04' 35.0"
Black Ledge Buoy 2 <sup>1</sup> (N"2") (Pos# 2M)	Lat. 41° 18' 00.8" Long. 72° 03' 59.9"
Black Ledge Buoy 4 <sup>1</sup> (N"4") (Pos# 3M)	Lat. 41° 18' 03.7" Long. 72° 04' 18.3"
Black Ledge Buoy 6 <sup>1</sup> (N"6") (Pos# 4M)	Lat. 41° 18' 16.9" Long. 72° 04' 22.5"
New London Harbor Channel Lighted Buoy 1 ("1") (Pos# 5M)	Lat. 41° 18' 00.7" Long. 72° 04' 21.9"
New London Harbor Channel Lighted Buoy 2 ("2") (Pos# 6M)	Lat. 41° 18' 00.5" Long. 72° 04' 11.9"
Sarah Ledge Buoy <sup>1</sup> (C"1A") (Pos# 7M)	Lat. 41° 17' 40.6" Long. 72° 05' 25.8"
Rapid Rock Buoy <sup>1</sup> (RB N) (Pos# 8M)	Lat. 41° 17' 15.5" Long. 72° 06' 07.6"
Goshen Ledge Buoy <sup>1</sup> 5 (C"5") (Pos# 9M)	Lat. 41° 17' 28.2" Long. 72° 06' 19.1"
Little Goshen Reef Buoy 3 (C"3") (Pos# 10M)	Lat. 41° 17' 20.5" Long. 72° 06' 45.4"

Dumping Ground Lighted Buoy ✓ NL (W or "NL") Lat.  $41^{\circ} 16' 02.4''$   
(Pos# 11M) Long.  $72^{\circ} 04' 30.5''$

Red & White Research Buoy ✓ (uncharted - privately maintained)  
(Pos# 12M) Lat.  $41^{\circ} 16' 25.2''$   
Long.  $72^{\circ} 03' 58.8''$



RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	
POSITIONS DETERMINED AND/OR VERIFIED	
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	<i>M.B. Hickson</i>
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)	
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	<b>FIELD (Cont'd)</b> <b>B. Photogrammetric field positions** require</b> entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75 *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	<b>II. TRIANGULATION STATION RECOVERED</b> When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 <b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

April 1, 1981

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): 846-1490, New London, Connecticut

Period: August 8-28, 1980

ITEM INVESTIGATION:  
~~HYDROGRAPHIC SHEET~~

OPR: S-B610-RU/HE-80

Locality: Long Island Sound, Offshore of New London Harbor

Plane of reference (mean ~~lower~~ low water): 3.43 ft.

Height of Mean High Water above Plane of Reference is 2.58 ft.

REMARKS: Zone Direct.

  
Chief, Datums and Information Branch

GEOGRAPHIC NAMES

H-9951WD

Name on Survey	A ON CHART NO. 13212 B ON PREVIOUS SURVEY NO. 13213 C ON U.S. QUADRANGLE MAPS D FROM LOCAL INFORMATION E ON LOCAL MAPS F P.O. GUIDE OR MAP G RAND McNALLY ATLAS H U.S. LIGHT LIST K											
	AVERY POINT ✓	✓										
CONNECTICUT (TITLE) ✓	✓											2
FISHERS ISLAND ✓	✓											3
FISHERS ISLAND SOUND ✓	✓											4
GOSHEN POINT ✓	✓											5
GROTON ✓	✓											6
LONG ISLAND SOUND ✓	✓											7
MUMFORD POINT ✓	✓											8
NEW LONDON ✓	✓											9
NEW LONDON LEDGE ✓	✓											10
NEW YORK ✓	✓											11
NORTH HILL ✓	✓											12
RACE POINT ✓	✓											13
NEW LONDON HARBOR ✓	✓											14
												15
												16
												17
												18
									Approved:			19
												20
									<i>Chas E. Harrington</i>			21
									Chief Geographer - NCG2x5			22
									21 APRIL 1983			23
												24
												25



NOAA FORM		U.S. DEPARTMENT OF COMMERCE				REGISTRY NUMBER	
<b>WIRE DRAG SURVEY STATISTICS</b>						H-9951 WD	
RECORDS ACCOMPANYING SURVEY: To be completed when survey is processed.							
RECORD DESCRIPTION		AMOUNT		RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET(A&D)		1		SMOOTH OVERLAYS: POS., ARC		1	
DESCRIPTIVE REPORT		1		FIELD SHEETS AND OTHER OVERLAYS		57	
DESCRIPTION	TENDER RECORDS	GUIDE RECORDS	END RECORDS	DEPTH/POS (HYDRO)	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/SOURCE DOCUMENTS
ACCORDIAN FILES				1 FATHOM GRAMS RAW P/O			
ENVELOPES							
VOLUMES							
CAHIERS							
BOXES	1 - ALSO OTHER DATA						
NAUTICAL CHARTS(List): 13212, 27 <sup>th</sup> Edition; 13213, 32 <sup>nd</sup> Edition							
SHORELINE MAPS(List):							
SPECIAL REPORTS(List):							
<b>OFFICE PROCESSING ACTIVITIES</b>							
<i>The following statistics will be submitted with the cartographer's report on the survey</i>							
PROCESSING ACTIVITY				AMOUNTS			
				VERIFICATION	EVALUATION	TOTALS	
POSITIONS (GUIDE, END, DP'S)						329	
POSITIONS REVISED				11	0	11	
CONTROL STATIONS REVISED				0	0	0	
DEPTHS REVISED(SOUNDINGS, DRAG DEPTHS)				0	0	0	
				TIME - HOURS			
				VERIFICATION	EVALUATION	TOTALS	
PRE-PROCESSING EXAMINATION				0	0	0	
VERIFICATION OF CONTROL				6	0	6	
POSITION VERIFICATION				31	0	31	
SUBDIVISION OF STRIPS				80	0	80	
SMOOTH POSITION SHEET				0	24	24	
SMOOTH SHEET(A&D)				0	38	38	
EVALUATION OF SIDESCAN SONAR RECORDS				0	0	0	
COMPARISON WITH SURVEYS AND CHARTS				0	23	23	
EVALUATION REPORT				0	46	46	
OTHER				6	4	10	
TOTALS				123	135	258	
Pre-processing Examination by				Beginning Date		Ending Date	
N/A				-----		-----	
Verification of Field Data by				Time (Hours)		Ending Date	
M. B. Hickson				123		March 30, 1983	
Verification Check by				Time (Hours)		Ending Date	
N/A				-----		-----	
Evaluation and Analysis by				Time (Hours)		Ending Date	
M. B. Hickson				135		May 5, 1983	
Inspection by				Time (Hours)		Ending Date	
R. G. Inspe. F. Saulsbury R. D. Sanocki				5		Aug. 28, 1983	

*Etan Appd - D. W. Jones 5/2/84*

ATLANTIC MARINE CENTER  
EVALUATION REPORT

Registry No.: H-9951 WD

Field No.: R/H-10-1-80

Connecticut, Long Island Sound, Approaches to New London Harbor

Surveyed: July 29 through August 29, 1980

Scale: 1:10,000

Project No.: S-B610-RU/HE-80

Soundings: Wire Drag and  
Pneumatic Depth Gauge

Control: Del Norte  
(Range-Range)

Chief of Party ..... M.C. Grunthal  
Surveyed by ..... R.S. Moody  
..... D.H. Peterson  
..... P.M. Connors  
..... D.W. Yeager  
..... G.M. Barone  
..... G.A. DaSilva  
..... R.X. McCann  
Automated Plot by (Rough Strip) ..... Xynetics I201 Plotter (AMC)  
Smooth Sheet by ..... M.B. Hickson

1. Purpose of Survey

The purpose of this survey was to provide, where possible, a cleared effective depth of 40 feet or more in the vicinity of the charted wreck PD (item #1) located in the approach to the New London Harbor Channel. The results of this survey are discussed in this report and are portrayed on the smooth sheet (A & D).

*Wk PD charted  
from LN to M 4  
1970 in lat. 41° 24' N,  
long. 72° 04' 4  
W.*

2. Control and Shoreline

- a. The source of the control was not adequately described in Sections C. and D. of the Descriptive Report. See Section 6.b.1) of this report.
- b. Shoreline portrayed on the smooth sheet (A & D) is intended for orientation purposes. The source of shoreline is from Charts 13212, 27th Edition, March 17, 1979 and 13213, 32nd Edition, August 16, 1980.

3. Junctions

There are no junctions on this wire drag survey.

4. Comparison with Hydrographic Surveys

H-9212 (1971) 1:20,000 ✓  
H-8996 (1968) 1:10,000 ✓  
H-8926 (1966) 1:10,000 ✓

Comparisons between the present survey and prior surveys common to the area of investigation reveal the following:

H-9212 (1971) is a prior hydrographic survey common to the southeastern half of the present survey. No conflicts exist between present effective depths and prior soundings within the common area. *concur*

H-8996 (1968) is a prior hydrographic survey common to the northwestern half of the present survey. A pinnacle shoal found by the present survey at Latitude  $41^{\circ}16'57.6''$ , Longitude  $72^{\circ}05'52.1''$  has a least depth of 38 feet. The prior survey shows a 40-foot sounding on this shoal. The present data pertaining to this shoal is adequate to supersede prior hydrographic data common to this shoal. No conflicts exist between present effective depths and prior soundings within the common area. *concur*

H-8926 (1966) is a prior hydrographic survey common to a small eastern portion of the present survey. No conflicts exist between present effective depths and prior soundings within the common area. *concur*

- 5 Comparison with Charts 13212, 27th Edition, March 17, 1979  
13213, 32nd Edition, August 16, 1980 ✓

a. Hydrography

Charted hydrography within the common area originates with prior surveys H-9212 (1971), H-8996 (1968), and H-8926 (1966) and soundings from sources not readily ascertainable. Charted hydrography originating from identified sources is adequately discussed in Section 4. of this report. There are no charted soundings originating from unascertained sources that are in conflict with present survey effective depths. Charting recommendations based on the results of this survey are:

Hydrographer's Item 1 - Item 1 (AWOIS #1858) is a Dangerous Sunken Wreck, PD, charted in approximately Latitude  $41^{\circ}17'24''$ , Longitude  $72^{\circ}04'42''$ , originating with *Wk falls in 50 ft depth on H-8996 (1968)* Local Notice to Mariners No. 48 of 1970 and is identified as the 36-foot cabin cruiser, LAZY DAYS, which burned and sank in approximately 43 feet of water. The present survey did not locate the item but obtained a valid clearance effective depth of 40 feet over the reported position. The clearance by 42 feet is not considered valid *concur* due to insufficient overlap. As criteria for disproval has not been met, it is recommended that the Dangerous Sunken Wreck be retained as Existence Doubtful (ED) in the charted location with the note (cleared 40 feet).

Five hangs were encountered during this investigation. These hangs are:

*AWOIS 1855* 1) Shoal - *submerged* a rocky ledge measuring approximately 15 feet wide by 40 feet long, with a least depth of 38 feet, at Latitude  $41^{\circ}16'57.6''$ , Longitude  $72^{\circ}05'52.1''$ , clearance by 40 feet in one direction only is not valid (sloping side). Recommend charting this Shoal in accordance with present survey results. *38RK*

*AWOIS 3177* 2) Uninvestigated hang - hung at an estimated effective depth of 41 feet at Latitude  $41^{\circ}16'48.8''$ , Longitude  $72^{\circ}06'27.3''$  and was not cleared. Recommend charting this hang as a Submerged Obstruction without a wire drag clearance. *concur* *(falls between lines # 63-6 ft depths on H-8996)*

*AWOIS 3178* 3) Uninvestigated hang - hung at an estimated effective depth of 41 feet at Latitude  $41^{\circ}16'42.2''$ , Longitude  $72^{\circ}06'13.8''$  and was not cleared. Recommend charting this hang as a Submerged Obstruction without a wire drag clearance. *concur* *(falls between lines # 60-65' depths on H-8996)*

AWOIS 3179

4) Uninvestigated hang - hung at an effective depth of 43 feet at Latitude  $41^{\circ}16'59.9''$ , Longitude  $72^{\circ}04'36.0''$  and cleared by an effective depth of 41 feet. Recommend charting this hang as a Submerged Obstruction with a wire drag clearance of 41 feet. *44 ft. very nearby on H.8996-May be grounding rather than an obstruction.*

AWOIS 3180

5) Uninvestigated Temporary hang - hung at an effective depth of 42 feet at approximate Latitude  $41^{\circ}16'47.0''$ , Longitude  $72^{\circ}04'29.6''$  and cleared by an effective depth of 41 feet in one direction only. Recommend charting this hang as a Submerged Obstruction with a wire drag clearance of 41 feet. *CONCUR*

b. Aids to Navigation

Two fixed aids to navigation were used for calibration stations. The two fixed aids are published triangulation stations, listed in the survey control file, listed in the 1980 edition of the U.S. Coast Guard Light List, Volume I, and plotted on the smooth sheet (A & D). The two fixed aids to navigation are:

- ✓ New London Harbor Light *(Red sector covers Sarah Ledge & shoals westward)*  
(NEW LONDON HARBOR LIGHTHOUSE, 1835)
- New London Ledge Light ✓  
(NEW LONDON LEDGE LIGHTHOUSE, 1932)

Twelve floating aids to navigation were located by the present survey. The following floating aids are listed in the 1980 edition of the U.S. Coast Guard Light List, Volume I, agree with their charted positions and descriptions, and adequately marks the intended features.

- Frank Ledge Buoy *(18')*
- Black Ledge Buoy 2 *(22')*
- Black Ledge Buoy 4 *(36')*
- Black Ledge Buoy 6 *(15')*
- New London Harbor Channel Lighted Buoy 2 ✓
- Sarah Ledge Buoy 1 *(30')*
- Goshen Ledge Buoy 5 *(18')*
- Little Goshen Reef Buoy 3 *(20')*
- Rapid Rock Buoy *(18')*

New London Harbor Channel Lighted Buoy 1 was located by the present survey *Lat.  $41^{\circ}18'00''$ , Long.  $72^{\circ}04'21.9''$* . The Light List does not contain a listing of this buoy, nor is this buoy charted. However, New London Harbor Channel Lighted Buoy 3 is listed and charted and agrees positionally with the Channel Buoy 1 located by the present survey. *CONCUR (compilation ck with USCG in lat.  $41^{\circ}16'25.2''N$ , long.  $72^{\circ}03'58.8''W$ )*

A red and white, privately maintained research buoy was located by the present survey. This buoy is neither charted nor listed in the Light List. *Direction of color bands are unknown. in lat.  $41^{\circ}16'02.4''N$ , long.  $72^{\circ}04'30.5''W$*

The Dumping Ground Lighted Buoy NL located by the present survey agrees positionally and descriptively with the Light List but is noted as being 700 meters east-southeast of its charted position. *(160 m S.E. of its L.L. position) CONCUR*

Charted, privately maintained buoys W Or "2", W Or "3", and W Or "4" were not found by the present survey. These buoys are not listed in the Light List. *W Or "2" chkd lat.  $41^{\circ}16'56''$ , long.  $72^{\circ}03'97''$ . W Or "3" chkd lat.  $41^{\circ}16.6''$ , long.  $72^{\circ}05'29''N$ . W Or "4" is not chkd within the survey area.*

A listing of the located floating Aids to Navigation has been compiled and is included in the Descriptive Report. It is recommended that all floating Aids to Navigation common to the present survey be charted in accordance with the most current information available. *CONCUR*

6. Condition of Survey

The condition of the survey is satisfactory except as follows:

a. Field Work and Records

- 1) Two areas of insufficient overlap exist in the surveyed area in the vicinity of Latitude  $41^{\circ}16'31''$ , Longitude  $72^{\circ}05'47''$  and Latitude  $41^{\circ}17'34''$ , Longitude  $72^{\circ}04'43''$ . *concur*
- 2) Four of the five hangs encountered were not investigated. *concur*
- 3) Two hangs were not cleared. *concur*
- 4) Only one of the five hangs was cleared in two directions. *concur*
- 5) The hang on the shoal (Latitude  $41^{\circ}16'57.6''$ , Longitude  $72^{\circ}05'52.1''$ ) has a strong detached position and a least depth which precludes the necessity of obtaining a valid clearance. However, the shoal was cleared in one direction to an effective depth greater than the least depth. This discrepancy is attributed to a sloping side of the shoal causing the wire to slip over the shoal without any indication of a hang or grounding. The clearance is therefore considered invalid and a void area exists. This void area is not considered a split. *Area was adequately investigated with a Least Depth of 38ft on the rock. concur*
- 6) It would have been advantageous to have investigated the charted 36-foot shoal in Latitude  $41^{\circ}16'28.5''$ , Longitude  $72^{\circ}04'33.3''$  originating with H-9212 (1971). This shoal was cleared by an effective depth of 35 feet. *not request in project instruction.*
- 7) The only priors included in the survey records were the page-size, xerox copies of H-9212 (1971) and H-8996 (1968) included in the Project Instructions. ✓
- 8) No charts were included with the survey records. ✓

b. Descriptive Report

- 1) Control stations listed in Sections C. and D. of the Descriptive Report required the addition of establishment dates for 6 stations, correction of 4 station names, and the addition of the geographic position for 3 stations. ✓
- 2) No list of hangs was included in the Descriptive Report. All hangs occurring on this survey are addressed in Section 5. of this report. ✓
- 3) Only 3 of the 5 hangs occurring on this survey were addressed by the hydrographer. No charting recommendations were made for 4 of the 5 hangs. ✓

4) Prior surveys within the common area were not identified nor addressed by the hydrographer. The one sentence pertaining to prior surveys under Section N. MISCELLANEOUS is not considered an adequate comparison. ✓

5) Charts affected by this survey were not identified nor addressed by the hydrographer. The one sentence pertaining to charts under Section N. MISCELLANEOUS is not considered an adequate comparison. ✓

6) A Floating Aids to Navigation List was compiled during Evaluation and Analysis and is included in the Descriptive Report. ✓

7) A Geographic Names List (Form 76-155) was compiled during Evaluation and Analysis and is included in the Descriptive Report. ✓

8) A Nonfloating Aids or Landmarks for Charts List (Form 76-40) was compiled during Evaluation and Analysis and is included in the Descriptive Report. ✓

9) Necessary corrections made by the Evaluator to the Descriptive Report are denoted in red ink. ✓

#### c. Field Plotting

Field plotting consisted of pencil plots on individual mylar sheets and a field A & D sheet in pencil and color coded for clarity, not effective depth. ✓  
Although this is not in accordance with the Wire Drag Manual, it is considered adequate.

#### 7 Compliance With Project Instructions

This wire drag survey adequately complies with Project Instruction S-B610-RU/HE-80, Wire Drag, East Coast Investigations, Approach to New London Harbor, Connecticut, dated July 8, 1980 except as noted in this report.

#### 8. Additional Field Work

This is an adequate basic wire drag survey except as noted in this report. Additional work is recommended at an opportune time to resolve the four uninvestigated hangs addressed in Section 5. of this report as submerged obstructions. *concur*

#### 9. Special Considerations

a. One temporary hang was encountered during this survey. This hang was positioned using all available information pertaining to the hang, however the plotted position may be in error by as much as 400 feet and is therefore considered an approximate position. *concur*

b. Numerous groundings occurred during this survey at the end of many drag strips. These groundings were anticipated groundings on known shoals and therefore were not plotted on the smooth sheet (A&D). *concur*

c. Hangs on outset, pickup, or in void sections were smooth plotted with an estimated effective depth of hang. Two hangs on this survey have estimated hang depths. *CONCUR*

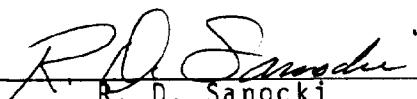
d. In strips containing a hang, the area past the initial contact of the hang was not claimed for effective depth coverage as the program of testing for lift is not considered sufficient to claim effective depths past the point of hang. *CONCUR*

*Maurice B. Hickson, III*  
Maurice B. Hickson, III  
Cartographer  
Evaluation and Analysis

INSPECTION REPORT  
H-9951WD

The completed survey has been inspected with regard to survey coverage, investigation of hangs and clearance depths, cartographic symbolization, and verification or disproval of charted data. The survey complies with National Ocean Service requirements except as noted in the Evaluation Report. The survey records comply with NOS requirements except where noted in the Evaluation Report. *concur*

Inspected

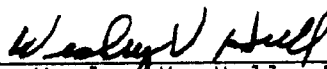


R. D. Sanocki  
Chief, Verification Section  
Hydrographic Surveys Branch



Karl Wm. Kieninger, CDR, NOAA  
Chief, Hydrographic Surveys Branch

Approved 2 September 1983



Wesley V. Hull, 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

N/CG242:FPS

October 30, 1984

TO: N/CG24 - Roy K. Matsushige *RAM*  
 FROM: N/CG242 *George K. Myers, Jr.*  
 SUBJECT: Examination of Wire-Drage Survey H-9951 (1980) WD

Chief of Party ..... M. C. Grunthal  
 Field Unit ..... NOAA Ships RUDE and HECK  
 Processed by ..... Atlantic Marine Center  
 Examined by ..... F. P. Saulsbury

An examination of wire-drag survey H-9951 (1980) WD was accomplished to monitor the survey for adequacy with respect to data acquisition; conformance with applicable project instructions; determination of the validity of hangs, groundings, and least depths; validity of cleared depths over obstructions in the survey area; A&D sheet; decisions made and actions taken by the evaluator; and the cartographic presentation of data.

Cartographic deficiencies and constructive comments are noted on a 1/2-scale copy of the A&D sheet which will be forwarded to the marine center.

In general, the survey was found to conform to National Ocean Service standards and requirements except as stated in the Evaluation Report and as follows:

1. Divers' statements for P-day investigation are included in "Vol. I, Launch 1275" under the heading only for N-day (on the front cover). Suggest that field work for different days contained in the same sounding or wire-drag volume be properly identified on the cover.
2. The comparison with prior survey H-4008 (1917-18) WD was overlooked by the surveyor and the survey evaluator. Conflicts between the present survey and H-4008 (1917-18) WD and charting recommendations follow:

a. The estimated hang depth of 41 feet in latitude 41°16.81'N, longitude 72°06.45'W on the present survey falls in an area formerly cleared with an effective drag depth of 50 feet. Because of the disparity in depth, it is considered likely that this item is a submerged wreck. Until such time as this item is identified, chart a 41-foot sounding labeled "submerged obstruction."



b. The estimated hang depth of 41 feet in latitude  $41^{\circ}16.70'N$ , longitude  $72^{\circ}06.23'W$  on the present survey falls in an area formerly cleared with an effective drag depth of 44 feet. This information indicates the existence of a cultural feature such as debris or a small wreck rather than a natural bottom feature. Until such time as clarifying data are available, chart as a 41-foot sounding labeled "submerged obstruction." *L1494(84)*

c. The submerged rock in latitude  $41^{\circ}16.96'N$ , longitude  $72^{\circ}05.87'W$ , accurately determined on the present survey to have a least depth of 38 feet, falls in an area formerly cleared with an effective drag depth of 39 feet. Perhaps the wire slipped over the rock with no hang being detected as occurred on the present survey, causing the 1-foot conflict. The least depth of 38 feet on this rock on the present survey is considered valid. Chart the 38-foot sounding and label "Rk" as shown on the present survey. *L1494(84)*

d. The hang at 43 feet in latitude  $41^{\circ}17.00'N$ , longitude  $72^{\circ}04.60'W$ , cleared to an effective drag depth of 41 feet on the present survey, falls in an area formerly cleared to an effective drag depth of 43 feet. Disregard the prior survey information and chart a submerged obstruction cleared to 41 feet as shown on the present survey. *L1494(84)*

e. The temporary hang at 42 feet (position approximate) in latitude  $41^{\circ}16.78'N$ , longitude  $72^{\circ}04.49'W$ , cleared by an effective drag depth of 41 feet on the present survey, falls in an area formerly cleared with an effective drag depth of 42 feet. Disregard the prior survey information and chart a cleared depth of 41 feet labeled "submerged obstruction, position approximate." *L1494(84)*

3. The 36-foot depth charted from H-9212 in latitude  $41^{\circ}16.47'N$ , longitude  $72^{\circ}04.55'W$  is cleared with an effective drag depth of 34 feet on the present survey. This area was formerly cleared with an effective drag depth of 49 feet on H-4008 (1917-18) WD. Conflict is attributed to dumping in this area prior to 1980. A dumping ground, authorized subsequent to 1918 and discontinued prior to 1980, occupies this area. Retain the 36-foot sounding as charted. *L257(84)*

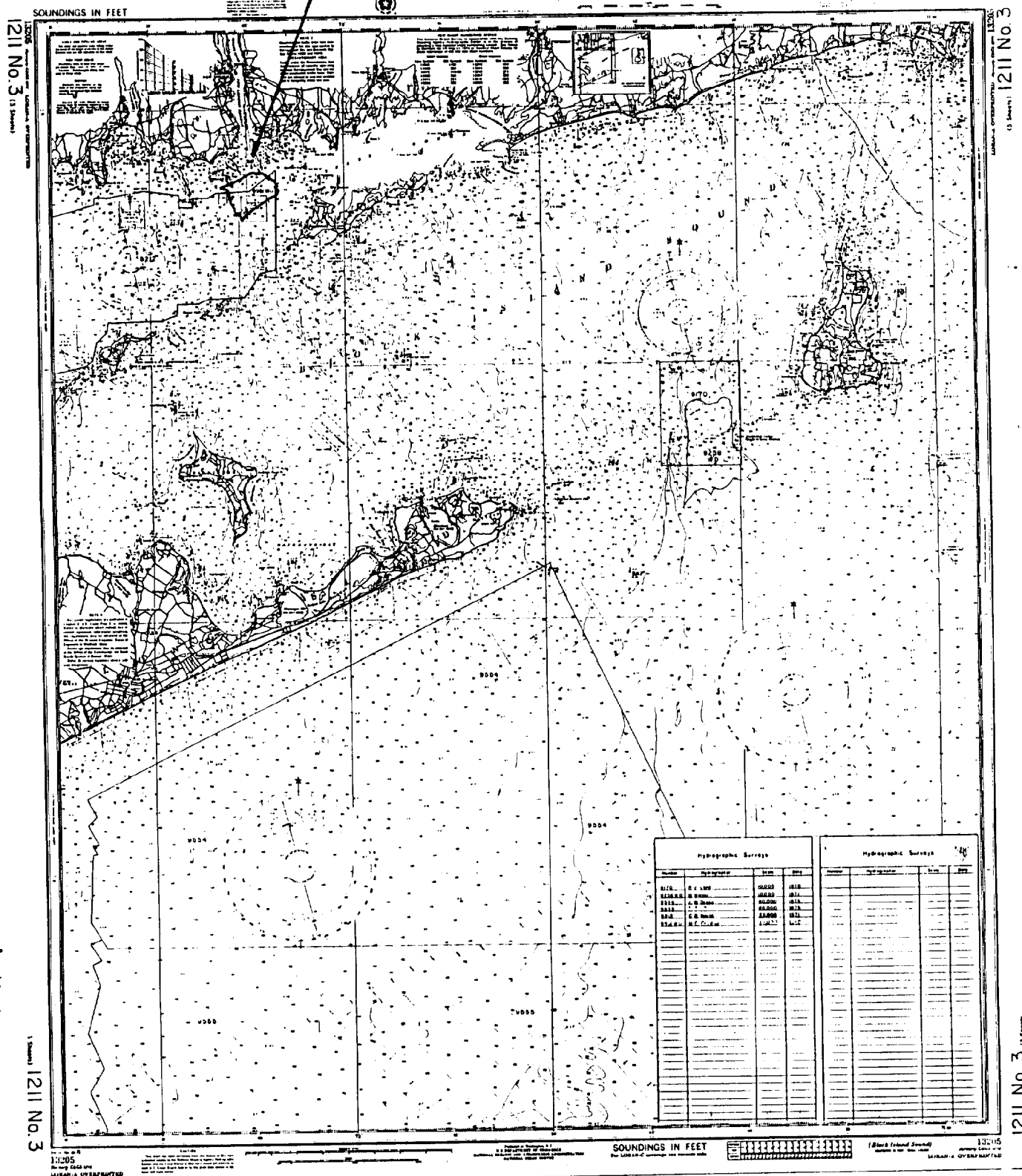
4. While project instruction were satisfied on the survey, inadequacies abound. The field unit started out simply to ascertain that a wreck in the area would be cleared to 40 feet. This accomplished, one charting question was resolved. But in resolving this one charting question, they created several additional charting questions. Hang depths with no clearances, estimated hang depths, and a hang with an approximate position are now items which will have to be scheduled for a future survey. Perhaps future project instructions should attempt to anticipate such survey results and provide guidance to the surveyor that would preclude any need for additional work.

5. The hydrographer did not identify addressed items with geographic positions.

cc:  
N/CG241

H-9951 Wire Drag

Master Diagram No. 1211-3



Hydrographic Surveys				Hydrographic Surveys			
Station	Hydrographer	Date	Time	Station	Hydrographer	Date	Time
1178	H. J. King	1882	10.15				
1179	H. J. King	1882	10.15				
1180	H. J. King	1882	10.15				
1181	H. J. King	1882	10.15				
1182	H. J. King	1882	10.15				
1183	H. J. King	1882	10.15				
1184	H. J. King	1882	10.15				
1185	H. J. King	1882	10.15				
1186	H. J. King	1882	10.15				
1187	H. J. King	1882	10.15				
1188	H. J. King	1882	10.15				
1189	H. J. King	1882	10.15				
1190	H. J. King	1882	10.15				
1191	H. J. King	1882	10.15				
1192	H. J. King	1882	10.15				
1193	H. J. King	1882	10.15				
1194	H. J. King	1882	10.15				
1195	H. J. King	1882	10.15				
1196	H. J. King	1882	10.15				
1197	H. J. King	1882	10.15				
1198	H. J. King	1882	10.15				
1199	H. J. King	1882	10.15				
1200	H. J. King	1882	10.15				

1211 No. 3

1211 No. 3

1211 No. 3

1211 No. 3

SOUNDINGS IN FEET



13215

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9951 WD

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
12354	12-1-83	Walter J. Fitz	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No.
12372-A	11-29-83	Walter J. Fitz	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No.
13205	12-13-83	Walter J. Fitz	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. 51
13212	11-29-83	Walter J. Fitz	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No.
13213	11-30-83	Walter J. Fitz	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No.
13214	11-30-83	Walter J. Fitz	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No.
13212 Reviewed WAF	12-12-84	H. Radde	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. Applied Corrections
12372A Reviewed WAF	12-12-84	H. Radde	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. 25 Applied Corrections
13254 Reviewed WAF	12-13-84	H. Radde	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. 55 Applied Corrections
13205 Reviewed WAF	12-13-84	H. Radde	Full <del>Part Before</del> After Verification Review Inspection Signed Via Drawing No. 51 Applied Corrections
13214	12-12-84	H. Radde	No corr
13213	12-12-84	H. Radde	No corr