

# 8936

Diag. Chat. No. 1211-2.

FORM C&GS-504			
U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION COAST AND GEODETIC SURVEY			
DESCRIPTIVE REPORT			
Type of Survey	Hydrographic		
Field No.	742-10-2-67	Office No.	H-8936
LOCALITY			
State	Connecticut		
General locality	Thames River		
Locality	New London to Norwich		
<u>1967</u>			
CHIEF OF PARTY			
A. J. Patrick			
LIBRARY & ARCHIVES			
DATE	Feb. 12, 1969		

USCOMM-DC 37022-P66

8936

## HYDROGRAPHIC TITLE SHEET

H-8936

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.

742-10-2-67

State CONNECTICUTGeneral locality New London to NorwichLocality GALES FERRYLocality THAMES RIVERScale 1:10,000 Date of survey 8/8/67 to 10/16/67Instructions dated 3/31/66 & 5/19/67 Project No. OPR-414Vessel Launch CS-1177, Skiff CS-758 and Skiff CS-528Chief of party LCDR ARCHIBALD J. PATRICKSurveyed by FLOYD R. GILDEN JR.Soundings taken by echo sounder, hand lead, poleGraphic record scaled by PARTY PERSONNELGraphic record checked by PARTY PERSONNELProtracted by Harry R. Smith Automated plot bySoundings penciled by Harry R. Smith Verification by: Fred BeanSoundings in feet feet at MLW MLW

REMARKS:

**SHEET LAYOUT**

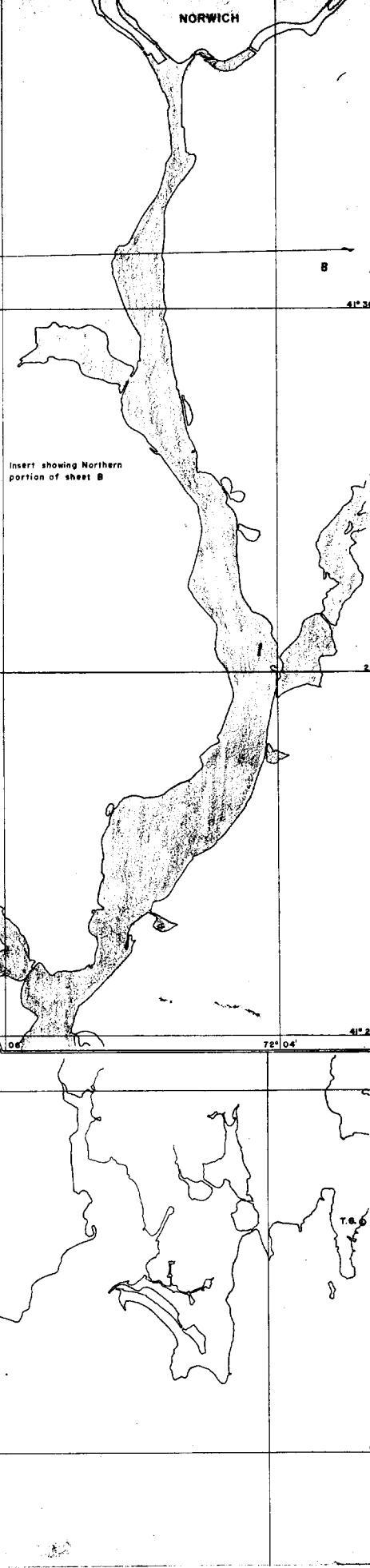
OPR-414  
FISHERS ISLAND SOUND  
HYDROGRAPHIC FIELD PARTY 742  
CHIEF OF PARTY: LCDR A.J.PATRICK  
1967  
1 JUNE - 30 JUNE  
SCALE C.B.G.S. CHART 359

**H-8936  
742-10-2-67**

**742-05-1-67  
H-8935**

**NEW LONDON**

**GROTON**



DESCRIPTIVE REPORT  
TO ACCOMPANY HYDROGRAPHIC SURVEY H-8936  
(Field No. 742-10-2-67)

SCALE: 1:10,000

HFP-742

PROJECT: OPR-414

OFFICER -IN-CHARGE: ARCHIBALD J. PATRICK  
LCDR, USESSA

SURVEYED BY: FLOYD R. GILDEN JR.

A. PROJECT

Work on project OPR-414 was done in accordance with Basic Instruction dated 31 March 1966 and Supplemental Instruction dated 19 May 1967.

B. AREA SURVEYED

The area covered by this survey is in the vicinity of Thames River and covers the area between Norwich and New London, Connecticut.

Latitude 41°22.30'N to 41°31.30'N  
Longitude 72°02.50'W to 72°06.50'W

Field work on this survey commenced on the 8 day of August 1967 and ended on the 16 day of October 1967.

Junction was made on the south with contemporary survey H-8935 (Field No. 742-05-1-67), scale 1:5,000, 1967.

C. SOUNDING VESSELS

The following vessels were used to obtain hydrographic data on this survey:

<u>VESSEL</u>	<u>IDENTIFYING COLOR</u>
Launch CS-1177	BLUE
Skiff CS-758	RED
Skiff CS-528	GREEN

D. SOUNDING EQUIPMENT

Raytheon Graphic Recorder, model DE-723, serial No. 806, (47.5 KC) was used on Skiff CS-758. Raytheon Graphic Recorder, model DE-723, serial no. 927 was used on Launch CS-1177. Pole soundings only were obtained with Skiff CS-528. Corrections to be applied to echo soundings were

determined from daily bar checks. An abstract of these corrections is tabulated in APPENDIX "B" of this report.

#### E. SMOOTH SHEET

~~This survey will be smooth plotted at the Atlantic Marine Center, Norfolk, Virginia.~~

#### F. CONTROL

Horizontal control was obtained by standard visual three-point sextant fix methods. APPENDIX "A" of this report contains a complete list of control used and the quality and source of the control.

#### G. SHORELINE

Shoreline detail was taken from manuscript T-11785, T-11784 and T-11783. Man made changes are noted on the boat sheet in red. These changes are in the following areas: Latitude  $41^{\circ}22.80'$  - Longitude  $72^{\circ}05.88'$ ; Latitude  $41^{\circ}28.90'$  -  $72^{\circ}04.40'$ . Note that construction still continues in the areas of Latitude  $41^{\circ}28.90'$  - Longitude  $72^{\circ}04.40'$ .

T11788 1:5000 Advance  
plus cautious application  
of 1965 photorevision and  
1966 field edit (Bp69460-61)  
should be used between  
 $41^{\circ}22'30''$  and  $24'30''$  CH

#### H. CROSSLINES

Crosslines were run at approximately 8% of the regular system of hydrography. Crosslines were in good agreement with the regular system of sounding lines.

#### I. JUNCTIONS

Depths at junction on the south with survey H-8935 (742-05-1-67) are in agreement and depth curves can be adequately drawn at this junction, with the exception of the twelve foot curve on the west side of the river. The discrepancy here is due to the sounding being plotted on survey H-8935 with predicted tides and without velocity corrections being applied. *Curve discrepancy resolved*

#### J. COMPARISON WITH PRIOR SURVEYS

The results of this survey were compared with the following prior surveys:

NUMBER	DATE	SCALE
2487	1900	1:10,000
2486	1900	1:10,000
2473	1900	1:50,000
1527	1882	1:10,000

No agreement was obtained due to the lack of soundings and time of prior surveys. In the channel this survey showed deeper depths in general.

All Pre Survey Items will be discussed under section "K" COMPARISON WITH CHART of this report.

#### K. COMPARISON WITH CHART

This survey was compared with chart C&GS 293, 20th Edition, dated May 15, 1967, scale 1:10,000, insert scale 1:5,000 and C&GS 359, 19th Edition, dated November 1, 1965, scale 1:20,000.

Good agreement was found with the charted features except as noted below:

FEATURE	POSITION	REMARKS
PSI #40E Log Boom	41°29.08' 72°04.58'	Relative position, shape and size of Log Boom remains the same, however Log Boom is in ruins. Also a bare rock reported by Coast Pilot west of the Log Boom and just southwest of Fort Point was searched for but not found. It is possible that this rock may be the end of the nearby dike. It is recommended this area be marked foul from position 11 "j" skiff CS-758 to position 12 "j" skiff CS-758 along the dike south and east down to the new bridge now under construction.
PSI #40D Subm. Wreck	41°26.03' 72°05.67'	A search was made for this wreck utilizing a 100 foot chain sweep towed behind Launch CS-1177. (Volume #8, "b" day) There was no indication of this wreck in this area. Recommended this feature be deleted from the chart.
PSI #40C Wreckage	41°22.85' 72°05.75'	This wreckage shown on chart still exist and should be retained on the chart.

concur

(3)

Newly found features to be charted:

FEATURE	POSITION	REMARKS	
Wreck	$41^{\circ}29.75'$ $72^{\circ}04.98'$	Only keel and part of hull remain. (Vol. 1 page 40)	✓
Shoal (Rocky)	$41^{\circ}27.95'$ $72^{\circ}04.24'$	Least depth on shoal 1 foot shown as * MLW. (Vol. 8 page 24)	✓
Wreck (barge)	$41^{\circ}27.18'$ $72^{\circ}04.99'$	This barge came from manuscript T-11784 and was verified visually by this survey. (Vol. 3 page 65)	✓
Pile	$41^{\circ}26.64'$ $72^{\circ}05.08'$	Pile bares 3 feet MLW (Vol. 4 page 37)	✓
Pier	$41^{\circ}22.81'$ $72^{\circ}05.85'$	New pier located by this survey. (Vol. 7 page 4)	✓
Buoys (2)	1- $41^{\circ}22.68'$ $72^{\circ}05.74'$ 2- $41^{\circ}22.68'$ $72^{\circ}05.80'$	These two private buoys should be charted. (Vol 7 page 25) only offshore buoy located	✓ see note on next page
Wreck	$41^{\circ}23.97'$ $72^{\circ}06.12'$	Wreck bare 2.2 feet MLW. (Vol 9 page 53)	✓
Marina	$41^{\circ}26.01'$ $72^{\circ}05.41'$	This marina is still under construction. (Vol 9 page 60)	✓
Obstruction	$41^{\circ}26.60'$ $72^{\circ}05.35'$	Obstruction bare 4.0 feet MLW. (Vol 4 page 43)	✓
Rock	$41^{\circ}25.08'$ $72^{\circ}05.86'$	Rock awash MHW. (Vol 8 page 31)	✓
Drain	$41^{\circ}22.63'$ $72^{\circ}05.73'$	Fix was obtained on offshore end of drain. The direction drain extends to shore is unknown. (Vol. 8 page 31)	✓ Pipe at 48°
Obstruction	$41^{\circ}22.53'$ $72^{\circ}05.24'$	Iron obstruction submerged 0.8 feet MLW. (Vol 8 page 49)	✓
Pontoons (steel)	$41^{\circ}21.98'$ $72^{\circ}05.89'$	Steel pontoons are joined together with steel and extend to shore. (Vol. 5 page 51)	✓

Features to be deleted from the chart.

FEATURE	POSITION	REMARKS
Obstruction	41°23.16' 72°05.80' 2	Area of 100 meter in diameter covered by wire drag, negative results. Unable to cover more area due to boats moored in area. (Vol. 8 page 47) <span style="float: right;">✓ delete W.D. adequate</span>
Dolphin	41°23.25' 72°05.83'	Area of 75 meters in diameter <span style="float: right;">✓ ON T-11783 and Not plotted in smooth sheet.</span> covered by wire drag, negative results. Unable to cover more area due to boats moored in area. (Vol. 8 page 40) <span style="float: right;">✓ delete - W.D. adequate</span>
Piles	1- 41°22.68' 72°05.74' 2- 41°22.68' 72°05.80'	These piles were searched for <span style="float: right;">see "Buoys(2)" by wire drag, negative results. note on previous It is believed these piles could page be private buoys. <span style="float: right;">charted from b128012 chart as buoys shown on T-11783 (incomplete)</span></span>
Pier	41°22.75' 72°05.98'	Pier has been removed. (Vol. 7 page 5) <span style="float: right;">✓</span>
Piles	1- 41°23.13' 72°05.87'.27 2- 41°23.25' 72°05.78' 3- 41°23.03' 72°05.74'	These piles were searched for with the fathometer, negative results. Unable to drag areas due to boats moored. <span style="float: right;">✓ delete</span>
Pile	41°23.03' 72°05.74'	Area of 125 meters covered by wire drag, negative results. <span style="float: right;">✓ Subm pile 9/25-50 (Vol. 8 page 42) delete - W.D. adequate</span>

Features to be changed on the chart.

Shoal	41°30.10' 72°04.92'	This shoal has shifted northward approximately 300 meters. <span style="float: right;">✓</span>
5 foot depths	41°26.28' 72°05.77'	Chart C&GS8359 shows 5 foot in this area. This survey shows depths of 1 foot. <span style="float: right;">✓</span>

L. ADEQUACY OF SURVEY

This survey is considered adequate and accurate to supersede prior surveys for charting purpose.

## M. AIDS TO NAVIGATION

The U.S. Coast Guard maintains 21 floating aids and 17 fixed aids to navigation within the limits of this survey. These aids adequately serve the purpose for which they were established.

The following change is to be noted to Light List, Volume 1, Atlantic Coast, 1966:

Buoy # 8 is now lighted, Flashing 4 seconds, Red.

There were a total of 9 privately maintained aids to navigation within the limits of this survey. Two were not listed in the Light List. Location of these aids are in the general area of Latitude 41°22.68', Longitude 72°05.75' in approximately 15 feet of water and are maintained by the Thames River Shipyard Inc.

## N. STATISTICS

VESSEL	NO. OF POSITIONS	NAUT. MILES SOUNDING
Skiff CS-758	1288	110.4
Launch CS-1177	205	5.5
Skiff CS-528	<u>181</u>	<u>10.8</u>
TOTAL	1674	126.7

TOTAL AREA SURVEYED: 3.5 Sq. Naut. Miles

There were 74 bottom samples taken on this survey.

There were no current station or oceanographic stations observed within the limits of this survey.

The Tide Gage at Norwich, Connecticut furnished tide control for this survey. See APPENDIX "C" TIDAL NOTE for information on this station.

## O. MISCELLANEOUS

On Launch CS-1177 a modified sweep was utilized to search for submerged objects. This sweep consisted of two trawl boards, identical to those used by shrimp trawlers, with 100 feet length of small chain between them. The trawl boards were bridled and towed in such a manner as to drag along the bottom approximately 150 feet behind the Launch, upon snagging an object the tow lines to the trawl boards would come together slowly allowing the coxswain sufficient time to stop the launch.

Respectfully submitted,  
*Floyd R. Gilden Jr.*  
Floyd R. Gilden Jr.  
Surveying Technician

APPENDIX A  
List of Signals

ABE	T-11783
ARV	HARVARD BOATHOUSE CUPOLA, 1934
BAG	T-11783
BAR	BARTLETT POINT <sup>5</sup> LIGHT NO. 9, 1934
BUD	T-11783
CAB	T-11783
CAT	T-11784
COW	T-11784
CUP	T-11783
DAW	T-11783
DAY	T-11783
FAR	T-11783
FAT	T-11783
FED	T-11783
FEW	T-11783
FIG	T-11783
FIT	T-11784
FLA	YALE CREWHOUSE FLAGSTAFF, 1934
FOR	T-11784 NEW LONDON
FOX	CONNECTICUT COLLEGE STACK, 1934
GOB	T-11784
GUM	T-11784 <sup>14</sup>
HEG	MOHEGAN DIKE LIGHT NO. 26, 1934
ICE	ICE HOUSE LIGHT NO. 5, 1960
IDA	T-11783
JAP	T-11784
JOE	T-11783
JUG	T-11784
KEN	T-11784 (green)
KIM	T-11784
LED	LEDGE (U.S.E.), 1934
LOW	LONG REACH LOWER LIGHT NO. 14, 1934
MAG	T-11783 <sup>8</sup>
MAX	T-11783
MET	T-11783
MID	T-11783
MIT	SMITH'S CHIMNEY, 1934
MIX	T-11784
MOO	T-11784 (blue) Top
MOP	T-11784
NAG	BETH-JACOB SYNAGOGUE TOWER, 1934
NEY	HARVARD CHIMNEY, 1934

APPENDIX A (cont)

NOR	T-11784
NOT	T-11784
NUT	T-11783
OAK	T-11784
OWL	T-11784
PIE	SAND PIER LIGHT <sup>15</sup> NO. 37, 1934
PIG	T-11783
POL	T-11783
POP	T-11784
PRI	PRIDE PIER <sup>16</sup> LIGHT NO. 39, 1934
QUO	T-11785
RAT	T-11784
REA	LONG REACH UPPER <sup>9</sup> LIGHT NO. 17, 1934
RIP	T-11784
ROC	PERCH ROCK <sup>13</sup> LIGHT NO. 33, 1934
ROT	T-11785
ROW	T-11784
ROX	T-11785
ROY	T-11785 (blue) <sup>Topo</sup>
RUB	T-11785
RUT	T-11784
SAD	T-11785
SAM	BAILEY POINT LIGHT NO. 6, 1934 (Topo) Rebuilt 1941
SCO	SCOTCH CAP LIGHT 1, 1960
STA	GAIR COMPANY STACK, 1934
TAN	T-11783
TOM	T-11784
TOW	T-11783
URN	BURN <sup>18</sup> HOUSE PIER LIGHT NO. 32, 1934
USE	NO. 2 (U.S.E.), 1934
VAL	T-11785
VAT	T-11784
VEX	T-11784
VIA	T-11783
VIB	T-11783
VIM	T-11784
VIC	T-11783 (blue) <sup>Topo</sup>
WAG	T-11784
WER	LOWER COAL DOCK <sup>20</sup> LIGHT NO. 40, 1934
WIG	T-11783
YAK	T-11783
YAM	COAST GUARD ACADEMY STACK, 1934
YES	T-11784
ZAG	T-11784
ZOO	T-11783
ZOT	T-11784
ZOR	T-11783
WOO	T-11784
PuP	T-11784

APPENDIX B  
Corrections to Echo Soundings

Skiff CS-758 Fathometer, DE-723, # 806 All days	Fath. Depth (Ft.)	Corr. (Ft.)
	0.0 to 4.1	0.0
	4.2 to 6.9	+0.2
	7.0 to 11.3	+0.4
	11.4 to 15.9	+0.6
	16.0 to 21.9	+0.8
	22.0 to 29.1	+1.0
	29.2 to 36.1	+1.2
	36.2 to Deeper	+1.4
Launch CS-1177 Fathometer, DE-723, # 927 "a" day	0.0 to 6.0 6.1 to 12.0 12.1 to 20.2 20.3 to Deeper	-0.6 -0.4 -0.2 0.0
Launch CS-1177 Fathometer, DE-723, # 927 "b" day	0.0 to 8.6 8.7 to 18.0 18.1 to 22.6 22.7 to Deeper	-0.6 -0.4 -0.2 0.0

## APPENDIX C TIDAL NOTE

GAGE LOCATION: Norwich, Connecticut  
Lat.  $41^{\circ}31.36'$   
Long.  $72^{\circ}04.64'$

GAGE TYPE: Pressure Recording

STAFF: Mean Low Water corresponds to 2.1 feet on the staff.

**CORRECTIONS:** No Time or height corrections were applied to data obtained from gage in reducing soundings.

TIME MERIDIAN: 75th

**TIDE NOTE FOR HYDROGRAPHIC SHEET**

November 9, 1967

~~Hydrographic Division~~

Atlantic Marine Center

Plane of reference approved in  
9 volumes of sounding records for

HYDROGRAPHIC SHEET 8936

Locality: Gales Ferry, Thames River, Connecticut

Chief of Party: A.J. Patrick (1967)

Plane of reference is mean low water

Tide Station Used (Form C&GS-681):

Norwich, Connecticut

Height of Mean High Water above Plane of Reference is as follows:

3.1 feet

Remarks

Tide reducers for the following positions have been revised  
in red and verified.

Vol.      Position

2      C7 - C12

*J. M. Synowd*  
\_\_\_\_\_  
Chief, Tides and Currents Branch

APPENDIX C  
GEOGRAPHIC NAMES

Photo Party 61 submitted a special report on geographic names during the 1966 season. There were no changes or additions to this report by Hydrographic Field Party 742. This report covered the area between Point Judith, Rhode Island to Connecticut River Entrance, Connecticut.

## APPENDIX D

### Approval Sheet to Accompany Hydrographic Survey H-8936 (742-10-2-67)

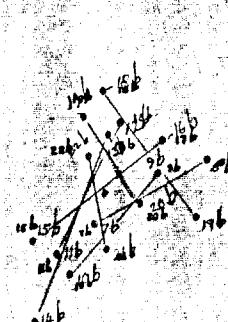
The field and office work was accomplished under my supervision.

The hydrography and descriptive report was done by Floyd R. Gilden Jr.

The report and records for this survey are complete and adequate to the best of my knowledge.

Approved and forward,

*Archibald J. Patrick*  
Archibald J. Patrick  
LCDR, USESSA



NO. 1

WIRE DRAG OVERLAY (NO SOUNDINGS)

41°25'

HFP-742-10-2-67

H-8936

POSITION 7-23 b  
LAUNCH CS-1177 OCT. 6, 1967

72° 05'

41°23'

NO. 2

72° 05'

WIRE DRAG OVERLAY (NO SOUNDINGS)  
BFP-742-10-2-67- H-8936

d-DAY  
POSITION 1-56, 61-74

NORFOLK HYDROGRAPHIC PROCESSING BRANCH

ADDENDUM  
To Accompany

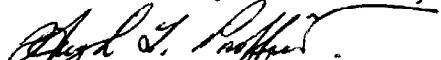
HYDROGRAPHIC SURVEY H-8936 (742-10-2-67)

GENERAL

This appears to be an excellent basic survey. Soundings are in good agreement at crossings and depth curves follow normal configurations.

Overlays showing the plotted positions observed while towing the modified sweep, as described in paragraph "O" of the descriptive report, are being submitted with the smooth sheet. No obstructions were found.

Respectfully submitted,



Hugh L. Proffitt  
Chief, Hydro Processing Br. AMC

Norfolk, Va.  
Feb. 5, 1969

**GEOGRAPHIC NAMES**  
Survey No. H-8936

## OFFICE OF HYDROGRAPHY AND OCEANOGRAPHY

## MARINE CHART DIVISION

## HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8936FIELD NO. 742-10-2-67

Connecticut -- Thames River, New London to Norwich

SURVEYED: August 8, 1967, through October 16, 1967SCALE: 1:10,000PROJECT NO.: OPR-414SOUNDINGS: Pole Soundings      CONTROL: Sextant angles  
DE-723 Raytheon Graphic      on shore signals  
Recorder

Chief of Party.....	A. J. Patrick
Surveyed by.....	F. R. Gilden, Jr.
Protracted by.....	H. R. Smith
Soundings Plotted by.....	H. R. Smith
Verified and Inked by.....	F. Bean (AMC)
Reviewed by.....	G. K. Myers
.....	Date: Nov. 18, 1969
Inspected by.....	R. H. Carstens

1. Description of the Area

This is an inshore survey of the Thames River and its tributaries from lat.  $41^{\circ}22.5'$  to lat.  $41^{\circ}31.5'$ . Along-shore features include dredged berths with piers and rows of dolphins, located primarily within the areas of the U.S. Naval Station. In the upper extremities of the river, dikes protrude from shore and extend parallel to the dredged channel.

A dredged channel extends the full length of this part of the river. Adjacent areas are generally shoal. Minor depressions and several low water areas appear offshore. Some small coves indent the shoreline with bridges spanning their entrances into the river.

Predominant bottom characteristics in this area are mud and sand. Evidences of a rocky bottom are found in a shoal area between Bartlett and Gales Ferry, while patches of grass appear south of Massapeag.

*last and*

The rocks located on the west side of Manseske Hill are considered to be the same as appear in advanced manuscript T-11788, which have been verified through examination of 1965 air photographs. The hydrographic positions of rocks are disregarded as appropriately shown on the smooth sheet.

## 2. Control and Shoreline

The source of control is adequately described in Part F of the Descriptive Report.

The shoreline originates with incomplete manuscripts T-11783, T-11784, and T-11785 of 1965, and thus may be subject to revision after review. Minor revisions of the shoreline by the hydrographer appear in red on the smooth sheet.

see note at G

## 3. Hydrography

A. Depths at crossings are in good agreement.

B. The usual depth curves are adequately delineated. The three-foot depth curve was added to more adequately delineate the bottom configuration.

C. The development of bottom configuration and investigation of least depths are considered adequate.

## 4. Condition of the Survey

The plotting, sounding records, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual, except that the triangulation station name of lights and the Light List designations were not properly shown on the smooth sheet.

## 5. Junctions

An adequate junction was made with H-8935 (1967) on the south. On the north, the present survey extended to the project limits.

## 6. Comparison With Prior Surveys

A.	H-114	(1839)	1:10,000
	H-115	(1841)	1:10,000
	H-1006	(1869)	1:1,200
	H-1242	(1874)	1:10,000
	H-1527	(1882)	1:10,000

These prior surveys taken together cover the common area of the present survey and are prior to any alterations from dredging or spoiling created by

construction of the dikes, naval berths, and Federal Channel Projects. These manmade improvements have made great changes in the bottom. In addition, sedimentation has resulted in leveling the bottom to a more even surface.

At the entrances and in some coves a shoaling from 1-2 feet has occurred, while a greater filling of 5-6 feet in depths appears in limited areas of some prior depressions. These changes are considered to be due to a gradual filling by current and tide deposits, hence the decreasing depths. The character of the bottom sediments have remained the same between the prior and present surveys.

In Poquetanuck Cove a few prior soundings have been retained in the sparsely developed area on the present survey to extend the continuity of the channel. With these additions the present survey is considered adequate to supersede the prior surveys in the common area.

B. H-2473 (1900) 1:5,000  
H-2486 (1900) 1:10,000  
H-2487 (1900) 1:10,000

These prior surveys cover largely the natural channel areas. Dredging has altered these to a major extent. An occasional line crossing inshore flats indicate a shoaling of 1 to 2 feet. In the channel on the east side of the river northeast of Bartlett shoaling of 4 to 8 ft. has occurred.

The present survey is adequate to supersede the prior surveys within the common areas.

7. Comparison With Charts 293 (latest print date 6/16/69)  
and 359 (latest print date 6/9/69)

A. Hydrography

Most of the charted hydrography originates with the previously discussed surveys, supplemented by partial application of the boat sheet (Bp-73112) and the verified smooth sheet of the present survey and from prior and subsequent information furnished by the Corps of Engineers and U.S. Navy.

Specific mention is made of the following:

1. Many soundings in the immediate vicinity of the Navy piers at the Submarine Base have been charted from subsequent Navy surveys of 1968 (Bps. 75578-79) and should be retained on the chart, with the exception of the 37-ft. sounding at lat.  $41^{\circ}23.33'$ , long.  $72^{\circ}05.37'$  which appears as a 31-ft. depth on the aforementioned surveys.
2. The 6-ft. sounding charted at lat.  $41^{\circ}26.94'$ , long.  $72^{\circ}04.95'$  from a Corps of Engineers condition survey of 1962 (Bp-62959) falls in depths of 12-14 ft. on the present survey and is probably 1 fm. in error. It is considered discredited by the present survey and should be deleted from the chart.
3. The 17-ft. sounding charted at lat.  $41^{\circ}24.01'$ , long.  $72^{\circ}05.67'$  from a Corps of Engineers survey of 1965 (Bp-40984) has been discredited by the present survey and should be deleted from the chart.
4. Many rocks awash charted along shore originate with contemporary field edit information included on Bps. 69459-69461 and Bps. 71052-71054 and should be retained on the chart.
5. The 12-ft. sounding charted at lat.  $41^{\circ}31.42'$ , long.  $72^{\circ}04.56'$  from a Corps of Engineers survey of 1904 has been discredited by the present survey and should be deleted from the chart.
6. The obstructions charted in  $41^{\circ}27.03'$ , long.  $72^{\circ}04.52'$  from Bp-71053 are noted in the records of the present survey to be a mooring buoy and floating dock and should be disregarded in charting.
7. The obstruction charted in 22-ft. depths in  $41^{\circ}27.16'$ , long.  $72^{\circ}05.15'$  from Bp-71053 showing features from air photographs without field edit, was not noted by the hydrographic party. As the identity of the obstruction has not been determined the obstruction is considered to be of a temporary nature and should be deleted from the chart.

8. The submerged wreck charted in lat.  $41^{\circ}26.02'$ , long.  $72^{\circ}05.65'$  from a Corps of Engineers survey of 1938, Bp-32225, was adequately investigated by a chain drag on the present survey and is considered disproved. It should be deleted from the chart.

9. The 4 obstructions charted in the vicinity of lat.  $41^{\circ}22.6'$ , long.  $72^{\circ}05.7'$  from Bp-69461 were considered, after reexamination of the photographs, to be mooring buoys. These charted obstructions should be disregarded.

10. The 2 submerged piles charted in the vicinity of lat.  $41^{\circ}22.68'$ , long.  $72^{\circ}05.75'$  correspond to 2 privately maintained buoys on the present survey and should be so charted.

The present survey is adequate to supersede the prior charted hydrography except as noted above.

B. Topography

1. The dolphins charted at piers 19-25 of the naval installation from Chart Letter 1708, 1965, and contemporary field edit information (Bp-69460) appear as ruins on the present survey and should be retained on the chart.

2. The piers, piles, and ruins charted in the vicinities of Smith and Mamacoke Caves originate with contemporary field edit information Bp-69461 and should be retained on the chart.

3. The marine railway charted at lat.  $41^{\circ}23.37'$ , long.  $72^{\circ}05.41'$  from a U.S. Navy map of 1947 (Bp-44555) was neither proved nor disproved by the present survey and should be retained on the chart.

4. The noise measurement pier charted at lat.  $41^{\circ}23.27'$ , long.  $72^{\circ}05.36'$  from Chart Letter 62, 1969, subsequent to the present survey should be retained on the chart.

5. The piles charted in the immediate vicinity of lat.  $41^{\circ}23.26'$ , long.  $72^{\circ}05.34'$  originate with 1960 air photographs. Chart Letter No. 287 (65) and 116 (65) report removal of piles and pier in this vicinity and piles as presently charted should be deleted.

6. The dolphins charted at lat.  $41^{\circ}22.67'$ , long.  $72^{\circ}05.88'$  and lat.  $41^{\circ}22.64'$ , long.  $72^{\circ}05.83'$  from contemporary field edit information (Bp-69461) should be retained on the chart.

7. The pier ruins charted at lat.  $41^{\circ}27.63'$ , long.  $72^{\circ}04.41'$  from 1943 air photographs were neither proved nor disproved by the present survey and should be retained on the chart.

8. The ruins charted at lat.  $41^{\circ}25.4'$ , long.  $72^{\circ}05.5$  from 1943-44 air photographs were neither proved nor disproved by the present survey and should be retained on the chart.

9. The piers charted at lat.  $41^{\circ}24.95'$ , long.  $72^{\circ}05.29'$  from 1960 air photographs (Bp-98240) were neither proved nor disproved by the present survey and should be retained on the chart.

10. The pier charted at lat.  $41^{\circ}28.3'$ , long.  $72^{\circ}03.77'$  from 1960 air photographs (Bp-98240) was not mentioned by the hydrographer. However, contemporary field edit information shows the pier to be nonexistent and therefore should be deleted from the chart.

11. The piles charted at lat.  $41^{\circ}25.72'$ , long.  $72^{\circ}05.57'$  from 1960 air photographs (Bp-98240) were neither proved nor disproved by the present survey and should be retained on the chart.

12. The pilings charted at lat.  $41^{\circ}25.45'$ , long.  $72^{\circ}05.89'$  from 1960 air photographs (Bp-98240) were neither proved nor disproved by the present survey and should be retained on the chart.

13. The pier ruins charted at lat.  $41^{\circ}25.45'$ , long.  $72^{\circ}05.97'$  from Chart Letter 646, 1939, were neither proved nor disproved by the present survey and should be retained on the chart.

14. The bridge charted at lat.  $41^{\circ}28.90'$ , long.  $72^{\circ}04.50'$  from Chart Letter 1642, 1968, is subsequent to the present survey and should be retained on the chart.

15. The small slopes charted in lat.  $41^{\circ}23.13'$ , long.  $72^{\circ}05.27'$  and  $41^{\circ}22.68'$ ,  $72^{\circ}05.31'$  from H-2473 could not be identified on 1965 photographs and are considered to be nonexistent. The latter shape probably corresponds to the rock awash which falls about 20 meters to the northward on the present survey.

16. The three sets of pier ruins charted in the vicinity of lat.  $41^{\circ}22.72'$ , long.  $72^{\circ}05.82$  to represent remnants of structures previously existing in these areas appear to be somewhat misleading as air photographs show the areas to be completely filled with boats. If these remnants have not already been removed it is probable that they are so deep as to have little effect on the use of the slips and therefore it is recommended that the ruins be removed from the chart.

17. The following charted items were adequately investigated with the chain-drag and are considered disproved.

1. Pile charted in lat.  $41^{\circ}23.02'$ , long.  $72^{\circ}05.73'$
2. Obstruction charted in lat.  $41^{\circ}23.16'$ , long.  $72^{\circ}05.81'$
3. Dolphin charted in lat.  $41^{\circ}23.28'$ , long.  $72^{\circ}05.82'$

Except as noted above, the present survey is adequate to supersede the charted information within the common area.

#### C. Controlling Depths

1. The charted controlling depth note--24 ft. reported, 1966--in lat.  $41^{\circ}26.55'$ , long.  $72^{\circ}05.22'$  from prior Corps of Engineers survey information, Chart Letter 780, 1966, is in agreement with the present survey and should be retained on the chart.

2. The charted controlling depth note--42 ft., October 1966--at Naval pier #17 in lat.  $41^{\circ}23.9'$ , long.  $72^{\circ}05.8'$  originating with Chart Letter 227, 1967, is in agreement with the present survey and should be retained on the chart.

3. In charted controlling depth areas in the main channel of the Thames River, present depths are as much as 1 ft. shoaler than prior Corps of Engineers surveys of 1961-1966.

#### D. Aids to Navigation

The fixed and floating aids located on the present survey are in substantial agreement with the chart and adequately mark the features intended, with the exception of the three fixed lights in lat.  $41^{\circ}29.18'$ , long.  $72^{\circ}04.65'$  originating with Chart Letter 768, 1959, prior to the present survey. Since these aids were referred to in the 1967 Light List, and there is no indication of any source subsequent to the survey that these aids had been removed, it is recommended that these lights be retained on the chart.

#### 8. Compliance With Project Instructions

This survey adequately complies with the Project Instructions.

$41^{\circ}22'30''$  to  $24'30''$  should be 1:5000. This survey was enlarged to apply to the 1:5000 inset of chart 293. C.R.

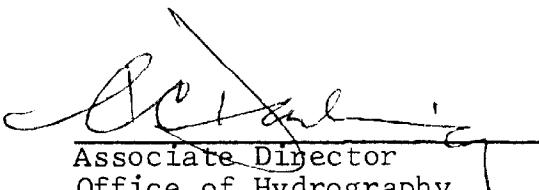
#### 9. Additional Field Work

The survey is considered an excellent basic survey and no additional field work is recommended at this time.

Examined and Approved:

  
John J. Boyer

Chief  
Marine Chart Division

  
R.C. Dahl

Associate Director  
Office of Hydrography  
and Oceanography

### Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8936..

Records accompanying survey: Smooth sheets ..1...;  
boat sheets ..1...; sounding vols. ..9...; wire drag vols. ..0...;  
Descriptive Reports ..1...; graphic recorder envelopes ~~3~~...;  
L Cahier-Fathograms  
special reports, etc. ....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	1674.
Number of positions checked	... 96.
Number of positions revised	.... 2.
Number of positions revised (refers to depth only)	... 12.
Number of soundings erroneously spaced	.. min:
Number of signals erroneously plotted or transferred	... 0...
Topographic details	Time .4 hrs
Junctions	Time 12... .
Verification of soundings from graphic record	Time .40 hrs
Special adjustments	Time none.

Verification by Fred Bean..... Total time 142 hrs Date 2/4/69

Reviewed by George K. Myers Time 154 hrs Date 11/18/69

NAUTICAL CHART DIVISION

## RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8936

## 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
293	2/27/69	C. White	Part Before After Verification Review Inspection Signed Via Drawing No.
359	3/28/69	J.M. O'Conner	Part Before After Verification Review Inspection Signed Via Drawing No.
116	5/7/69	C.J. Sunday	Part Before After Verification Review Inspection Signed Via Drawing No.
293	1/19/70	Alexander Fabo	Part Before After Verification Review Inspection Signed Via Drawing No.
293	Sep 70	R.D. Sanachis	Part Before After Verification Review Inspection Signed Via Drawing No. Full application only of hydrography; partial of shoreline (for that 2nd rocks, reexamine all sources and check against 1969 photos) P.M.
116	Aug 71	R.D. Sanachis	Part Before After Verification Review Inspection Signed Via Drawing No. #12 Applied area in common w/ ch. 293, drg #24
293	Sept. 71	Oscar Chapman	App'd review directly outside ch. 293
293	2-20-73	Paul R. Enthoven	Part Before After Verification Review Inspection Signed Via Drawing No. PROOF Deleted duplicate set of rocks from chart LW Curve
293	4-25-73	Paul R. Enthoven	Part Before After Verification Review Inspection Signed Via Drawing No. #27 RE-EXAM - NO CORR - CONSIDERED FULLY APPLIED
116-5C	"B" 6-1-73	John R. Bailey	Part Before After Verification Review Inspection Signed Via Drawing No. #14 FULLY APP'D thru Drwg. 359 #27

INDEX  
HYDROGRAPHIC SURVEYS  
1947-1951  
LONG ISLAND SOUND  
AND VICINITY

CONNECTICUT-NEW YORK

