

FE60

Diagram No. 1211-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey ... Field Examination

Field No.

Office No. FE-60

LOCALITY

State Connecticut

General Locality .. Block Island

Locality Off New London

1947

CHIEF OF PARTY

J.C. Sammons

LIBRARY & ARCHIVES

DATE June 23, 1947

☆ U.S. GOV. PRINTING OFFICE: 1976-669-441

NOTE: A new system for registering Field Examinations (FE's) was established in 1980. All FE's are now consecutively numbered as shown hereon. The date shown in the new format is the actual date of survey. This material was previously registered as:

FE No.2 1947

FE60

FENo.2
1947

Diag'd. on Diag. Cht. No. 1211-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey COMBINED

Special SHORAN Chart and

Field No. Chart No. 293 Office No.

LOCALITY

State CONNECTICUT

General locality BLOCK ISLAND

Locality off NEW LONDON, CONN.

194 7

CHIEF OF PARTY

Jack C. SAMMONS

LIBRARY & ARCHIVES

JUN 23 1948

DATE

FENo.2
1947

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

SPECIAL SURVEY
~~HYDROGRAPHIC~~ TITLE SHEET

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

REGISTER No. F. E. No. 2, 1947
Special SHORAN Chart
Field No. and Chart No. 293

F. E. - 2 - 1947

State Connecticut

General locality Block Island Sound

Locality off New London, Conn.

Scale 1-40,000 and 1-10,000 Date of survey 24 April - 8 May 1947

Instructions dated Director's Letter S-1-LY dated 31 March 1947

Vessel Ship LYDONIA and Launch No. 103

Chief of party Jack C. Sammons

Surveyed by E. B. Lewsy, G. E. Russell, Jr., W. E. Randall, and A. L. Powell

Soundings taken by fathometer, graphic recorder, ^{and} hand lead, ~~vice~~

Fathograms scaled by

Fathograms checked by

Protracted by

Soundings penciled by

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~

REMARKS: Since this work was to be of short duration (done during spare time while preparing for the SHORAN demonstration) no boat sheets were made. The work was plotted directly on charts. Positions of landmarks in Thames River and position of pile of rocks on Black Ledge were forwarded to the Washington Office on 19 May 1947.

DESCRIPTIVE REPORT

to accompany

Surveys in New London, Connecticut and Vicinity

Special Project F.E.No. 2, 1947

Ship LYDONIA

Jack C. SAMMONS, Comdg.

1947

Surveyed by: E. B. Lewey
G. E. Russell, Jr.
W. E. Randall
A. L. Powell

PROJECT:

This work was done under authority of the Director's Letter S-1-LY dated 31 March 1947. ✓

SURVEY LIMITS AND DATES:

Vicinity of mouth of Thames River and off New London, Conn., in Block Island Sound. ✓

Work was done between 24 April and 8 May 1947.

VESSELS AND EQUIPMENT:

Investigation of doubtful soundings in Block Island Sound were made with the Ship LYDONIA using the Dorsey Type 3 Fathometer and portable depth recorder 808 No. 75. ✓

Buoys in Thames River were located with Launch No. 103. ✓

Landmarks were located by triangulation.

TIDE AND CURRENT STATIONS:

No tide or current stations were operated by the party during this period.

Tidal reducers were obtained from predicted tides at New London, Conn. ✓

Final tide reducers and time differential, if any, should be obtained from the Division of Tides and Currents.

SMOOTH SHEET:

Assignment to be made by the Division of Charts.

CONTROL STATIONS:

A list of signals and the geographic positions of the two SHORAN stations used on this survey are attached herewith.

SOUNDINGS:

Soundings obtained by the ship were from the Dorsey Type 3 Fathometer. It was intended that a portable depth recorder be kept in constant use as a check on the Dorsey and to assure least depth over shoals, but the depth recorder broke down at position 32 A Day and was not again in operation during the period of this work.

Soundings alongside of buoys in the Thames River were obtained by handlead.

Abstracts of Temperature and Salinity Corrections are being forwarded with this report.

Instrumental error, squat, and draft corrections are attached herewith.

CONTROL OF HYDROGRAPHY:

Ship work was controlled by SHORAN. Due to unfavorable conditions on the first day, the correct zero settings were not properly determined. As a result, the corrections applied to the SHORAN readings in the field were in error. A correction of -0.03 stat. mi. was applied to readings from both stations. Actually, a correction of +0.01 stat. mi. should have been applied to readings from Station PLUM and a correction of +0.03 stat. mi. should have been applied to readings from Station MONT. Indicator No. 898 was used exclusively and its correct zero settings were determined as follows: Simultaneous observations were made with the SHORAN and sextants while the ship was stopped. Position of the ship was computed from the sextant angles and then the true distances to the SHORAN Stations were computed from the position of the ship. A comparison of the true distances and the distances as obtained by SHORAN gave the correct zero settings of the Indicator. The following results were obtained:

} Review

	<u>PLUM</u>	<u>MONT</u>
Computed Zero Settings	99.808	99.816
Mean of Hourly Zero Checks	<u>99.795</u>	<u>99.788</u>
Corrections to be applied	+0.013	+0.028

Since it is impractical to plot to three places, corrections of +0.01 and +0.03 should be applied to readings from PLUM and MONT respectively.

The work done in the Thames River by Launch No. 103 was controlled by sextant fixes on shore objects.

ADEQUACY OF SURVEY:

The work accomplished is considered to be adequate.

Time was not available for completion of the work requested.

COMPARISON WITH CHARTS:

Chart No. 1211:

1. Charted 94 ft. depth in Lat. $41^{\circ} 13.3'$ and Long. $72^{\circ} 10.0'$ was verified. A depth of ~~95~~⁹² ft. was obtained *at the same position.* *✓ 1212*
see H-9212
2. Charted 24 ft. depth in Lat. $41^{\circ} 16.4'$ and Long. $72^{\circ} 02.7'$ was not verified. The least depth obtained was ~~37~~³⁶ ft. *revised to 1231 on chts 358 & 1211* *see H-8926*
no cov
However, since this area was dragged and the drag fouled at 26 ft., it is thought that the charted depth should be retained. It is almost impossible to locate a small obstruction or pinnacle except by wire drag. *charted as 1231 from H-4008 (1917-18)*
This presurvey review item "5" for H-8926 (1966-68)
3. Charted 85 ft. depth in Lat. $41^{\circ} 12.8'$ and Long. $72^{\circ} 05.1'$ was verified. A depth of ~~80~~⁸¹ ft. was obtained. *160 meters east by southeast from the 85.* *see H-8709*
4. Charted 71 ft. depth in Lat. $41^{\circ} 12.2'$ and Long. $72^{\circ} 02.1'$ was not verified. The least depth obtained was ~~101~~⁹⁸ ft. It is recommended that the charted depth be retained for the reason stated in No. 2 above. *no cov*
see H-8709
5. Charted Target Raft in Lat. $41^{\circ} 08.3'$ and Long. $71^{\circ} 59.7'$ no longer exists. It should be deleted from the chart. *see H-8709*

DANGERS AND SHOALS:

A pile of rocks (apparently a sunken barge loaded with stones) bearing 2 ft. at H. W. on Black Ledge. Position and computations forwarded to the Washington Office on 19 May 1947. *(attached as page 5) 41°18.32' at 72°04.31'*
Presurvey review item "39" for H-8996 (1968) and confirmed dp. 5315

AIDS TO NAVIGATION:

The following buoys in the Thames River were located:

<u>Buoy</u>	<u>Position</u>
Small Mooring Buoy	Lat. $41^{\circ} 19.28'$ Long. $72^{\circ} 05.08'$ <i>✓ 16.8"</i>
Mooring Buoy No. 1	Lat. $41^{\circ} 19.57'$ Long. $72^{\circ} 05.15'$ <i>✓ 35</i> <i>✓ 9.0"</i>
Mooring Buoy No. 2	Lat. $41^{\circ} 19.70'$ Long. $72^{\circ} 05.17'$ <i>✓ 42"</i> <i>✓ 16.2"</i>
Mooring Buoy No. 3	Lat. $41^{\circ} 19.88'$ Long. $72^{\circ} 05.21'$ <i>✓ 52.8"</i> <i>✓ 26"</i>

AIDS TO NAVIGATION: (CON'T.)

<u>Buoy</u>	<u>Position</u>	
Mooring Buoy No. 4	Lat. 41° 20.02' ^{✓1.2}	Long. 72° 05.20' ^{✓12.0}
Mooring Buoy No. 5	Lat. 41° 20.18' ^{✓0.8}	Long. 72° 05.24' ^{✓14.3}
Buoy N2 (Black & Red Nun)	Lat. 41° 21.55' ^{✓23.0}	Long. 72° 05.37' ^{✓22.2}

Other sub-headings are not applicable.

Respectfully submitted,



E. B. Lewey, Lt. Comdr., C&GS.



G. E. Russell, Jr., Lieut. (jg) C&GS.

Approved and Forwarded:



Jack C. Summons,
Lt. Comdr., C&GS.,
Commanding Ship LYDONIA.

SIGNAL STATIONS USED ON NEW LONDON SURVEY - SHIP LYDONIA

SHORAN STATIONS

MONT - Montauk Point Lighthouse, 1882 Lat. $41^{\circ} 04' 15.113''$
Long. $71^{\circ} 51' 27.291''$

PLUM - Plum Island Lighthouse, 1874 Lat. $41^{\circ} 10' 24.876''$
Long. $72^{\circ} 12' 43.081''$

STATIONS USED BY SHIP

Little Gull Island, lighthouse, 1874

N. Dumpling Lighthouse, 1874

New London Ledge Lighthouse, 1932

Plum Island Lighthouse, 1874

Race Rock Lighthouse, 1874

STATIONS USED BY LAUNCH NO. 103

CHECK - Groton Elevated Wood Tank, 1947

EL - (Elev. tank shown on Chart NO. 293 in approx. Lat. $41^{\circ} 19' 11.2''$
and Long. $72^{\circ} 03' 56.8''$)

HILL - Tank on Bailey Hill, 1932

LACK - New London Black Tank near R. R. Bridge, 1932

LEDGE - New London Ledge L. H., 1939

NEW - New London Harbor L. H., 1839 - 1874

MONT - Groton Monument, 1869 - 1874

TACK - Stack at Fishery, 1932

TANK - Groton Electric Boat Works Tank, 1932

FATHOMETER CORRECTIONS

New London Survey, April 1947

Ship LYDONIA

COMBINED INSTRUMENTAL, SQUAT, AND DRAFT CORRECTIONS

<u>DATE</u>	<u>CORRECTION</u>	
	<u>Half Speed</u>	<u>Full Speed</u>
24 April 1947	-0.7 feet	-0.5 feet
25 April 1947	-0.7 feet	-0.5 feet
29 April 1947	-0.8 feet	-0.6 feet

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

18 September 1947

Division of Charts: H. W. MURRAY

Plane of reference approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET

F. E. No. 2 - 1947 (S-2485)

Locality - Block Island Sound (The Race).

Chief of Party: J. C. Sammons in 1947.
Plane of reference is mean low water, reading
3.0 ft. on tide staff at New London, Conn.
11.0 ft. below B. M. 12 (1938)

Height of mean high water above plane of reference is 2.6 feet.

Condition of records satisfactory except as noted below:

E. C. McKay
Section
Chief, ~~Division~~ of Tides and Currents.

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. (F. E. 2-1947)

Records accompanying survey:

Boat sheets; sounding vols. 2....; wire drag vols.;
 bomb vols.; graphic recorder rolls ...!...;
 special reports, etc. Temperature...and...Salinity...Corrections... (3 Sheets)
 1. cahier... SHORAN... zero settings computations

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

Number of positions on sheet	.....	300
Number of positions checked	.....	15
Number of positions revised	.....	2
Number of soundings revised (refers to depth only)	.....	5
Number of soundings erroneously spaced	.....	0
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time	..... 0
Junctions	Time	..... 0
Verification of soundings from graphic record	Time	..... 1/2 hr

Verification by *J. A. Dinsmore* Total time 16 hrs Date 9/19/47

Reviewed by *J. A. Dinsmore* Time 3 hrs Date 9/19/47

REVIEW OF FIELD EXAMINATION NO. 2, 1947

The work of this investigation appears on two sections of a Special Shoran Chart of Block Island Sound (scale 1:40,000), numbered Sheets 1 and 2. The plotted positions of "A" day's work are slightly in error because of the application of erroneous correction values to the Shoran distance readings. It was not considered necessary to replot these positions because no material aid would result in the investigation of Item No. 2. The 24-ft. depth was not considered disproved for reasons stated in the Descriptive Report. All work requested was not completed because of limited time.

Seven buoys (not charted) in the Thames River and a hazardous bare rock pile (not charted) on Black Ledge were located in addition to the requested items. Positions of the buoys and rock pile are furnished in the Descriptive Report. The buoys are also shown on a section of Chart 293, which is numbered Sheet 3 and filed with Sheets 1 and 2 above.

The results of the investigation are adequately covered on page 3 of the Descriptive Report and the recommendations by the hydrographer are concurred in.

Reviewed: September 19, 1947

T. A. Dinsmore

Inspected by: R. H. Carstens

FIELD COMPUTATION
GEOGRAPHIC POSITIONS

Accession No. of Computation: _____

Locality Thames River

North American 1927 Datum

-order Triangulation. State Connecticut

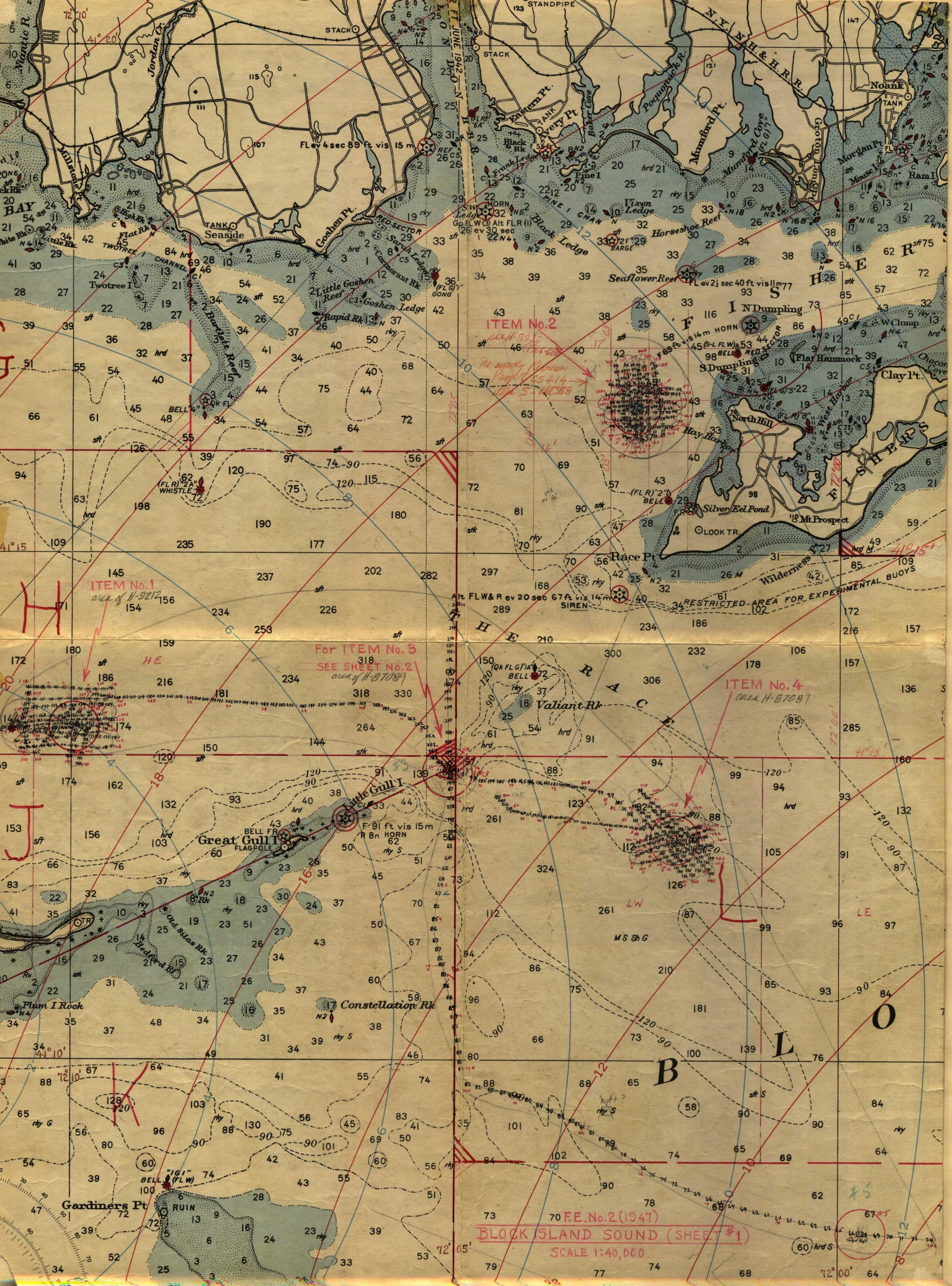
16-15634-1 U. S. GOVERNMENT PRINTING OFFICE

STATION	LATITUDE AND LONGITUDE	SECONDS IN METERS	AZIMUTH	BACK AZIMUTH	TO STATION	DISTANCE		
						LOGARITHM (METERS)	METERS	FEET
Pile of rocks on	41 18 19.48	600.9	114 09 05	324 08 24	Wall (USE)	3.38 4136	2,421.8	7,946
Black ledge 1947	72 04 18.83	438.0	200 28 24	20 28 36	Plant (USE)	3.09 8007	1,253.2	4,112
<p>Note: These rocks were located as Dangers to Navigation. They are on Black Ledge, entrance to Thames River, Conn. Rocks bare 2 feet at Mean High Water. Although the sides do not seem to check, these values are accepted because the "center of the rocks" was observed on, and agreement is within 0.9 meter.</p>								

¹ No check on this position.

Abbreviations used: d.=described; m.=marked; n.=not; r.=recovered; l.=lost; p.=probably.

(Examples: n. d.=not described; p. l.=probably lost.)



FL ev 4 sec 89 ft vis 15 m

ITEM No. 2
area of H-9212

ITEM No. 1
area of H-9212

For ITEM No. 3
SEE SHEET No. 2
area of H-87089

ITEM No. 4
area H-87089

Great Gull I
BELL FR
FLAGPOLE

F. 91 ft vis 15 m
R Bn HORN

70 F.E. No. 2 (1947)
BLOCK ISLAND SOUND (SHEET #1)
SCALE 1:40,000

67 #5

60 hrd S

#5

60 hrd S

60 hrd S

60 hrd S



41°22'

41°20'

41°19'

F.E. No. 2 (1947), SHEET No. 3

This chart used as Boat Sheet for locating seven buoys in Thames River April 28, 1947

06' 72° 05' (CONTINUED ON CHART 359)



Area of H-8935 (1967)

CHART No. 293 (NEW LONDON HARBOR & VICINITY) SCALE 1:10,000

NAUTICAL CHARTS BRANCH

SURVEY NO. (F. E. - 2 - 1247)

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
7/1/47	1211	F. A. McGinn	Before After Verification and Review <i>Partially</i> <i>completely applied here</i> Before After Verification and Review <i>By Survey Section</i>
7/2/47	357	F. A. McGinn	Before After Verification and Review <i>no correction</i>
7-24-47	358	W. H. Brock	Before After Verification and Review <i>no correction.</i>
8/6/47	298	Richardson J. F.	Before After Verification and Review <i>Partially applied</i>
8/11/47	293	Richardson J. F.	Before After Verification and Review <i>Partially applied</i>
3/25/48	1211	Richardson J. F.	Before After Verification and Review <i>completely applied.</i> Before After Verification and Review
4/20/48	1212	F. A. McGinn	Before After Verification and Review <i>completely applied ✓</i>
6/8/48	298	J. F. Richardson	Before After Verification and Review
10/11/49	362	Goodrich	<i>Applied through ch. 298</i>
Aug. 1951	358	J. H. Eaton	<i>Change 24 Obstr to 23 Obstr west of Fishers I.</i>

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review