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Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: Conn, NY, R.I.

11—5613

# DESCRIPTIVE REPORT.

Hyd. Sheet No. 4043

LOCALITY:

Long Island Sound

Approaches to and Eastern

Part of Fishers Island Sound

1918

CHIEF OF PARTY:

F.B.J. Siems

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Descriptive Report
to
Accompany Hydrographic Sheet No. 4043.

Field Letter "C".

Limits. The area dragged by Wire Drag Party No. 1, during 1918, comprises an area of about 4 square miles in the eastern half of Fishers Island Sound off Stonington, Connecticut, and that portion of Block Island Sound just south of Fishers Island and Rhode Island shore from Mt. Pleasant, Fishers Island to Pleasant View, forming a junction with the offshore dragging accomplished during the same season.

Some work in the western part of Fishers Island Sound was accomplished by Wire Drag Party No. 5, during 1918, but was plotted on another sheet.

The position numbers of the drag strips by Wire Drag Party No. 1 in 1918 are showed in black ink.

Color scheme for showing effective drag depths are standard for the 1918 work, that is:

| | | | | |
|---|---|---|---|---|
| 0-19 | feet | is | shown | brown |
| 20-29 | " | " | " | yellow |
| 30-39 | " | " | " | blue |
| 40-59 | " | " | " | red |
| 60-79 | " | " | " | purple |
| 80 and above | " | " | | orange. |

Instructions from Superintendent of April 13, 1918, (to J. H. Hawley) and Supplemental Instructions of June 7, 1918 and August 22, 1918, were followed in executing these surveys.

Tidal Reductions for drag depth and sounding were made using Stonington tide observations.

Control. All of the signals used for positions with the exception of two are located by triangulation. The signals are numerous, thus affording an excellent control. The descriptions of triangulation stations and objects recovered and established also hydrographic signals have been carefully compiled and forwarded to the office. They should be consulted in planning future surveys in this locality.

Methods. Drag lengths up to 6000 feet were used, and the position of far buoy was determined by the triangle computation method. A navigation sextant was used to determine distance angle. Soundings were taken in the guide launch (inshore end) to assist in following a certain depth curve. These soundings were recorded in some cases. Buoyed flags as ranges were used in Fishers Island Sound for guiding launches in dragging intricate channels. Only a short drag generally 1000 feet could be used advantageously in Fishers Island Sound, and in order to allow sufficient time for maneuvering and making drag depth changes, it was necessary to drag against the current, when not

stronger than about 1-1/2 knots. The towing launches frequently delayed dragging on account of engine trouble.

A print of chart 358 was made on backed paper and used as a boat sheet, and a true projection was fitted over the chart projection for accurate plotting of signals and positions. This made an excellent boat sheet as it furnished the hydrographic information in an excellent manner, however, unless a chart projection is unevenly distorted for boat sheet purpose, it was found advisable not to change the projection.

Results of the Survey: Soundings of less depths than previously obtained by other surveys are as follows:

1. A 12-ft. depth rocky bottom (boulders) in general depths of 20 to 22 feet was found with the wire drag in one of the channels between Noank and Stonington in Fishers Island Sound (see p. 6 - Vol. 4.)

2. A 16-ft. depth rocky bottom 1/2 mile westward of Eel Grass Shoal was discovered by wire drag in general depths of 51 to 55 ft. (see p. 42 - Vol. 3.)

3. Several depths of 30 to 40 feet were found off the east end of Fishers Island in Block Island Sound on the inshore edge of the work near the 60 ft. curve. (see p. 49, Vol. 1, p. 52 - Vol. 1, p. 4 - Vol. 2.)

4. A submerged navigation buoy off Lords Passage having a depth of 6 to 8 feet over it at slack water was discovered and its position was reported to Light House Inspector. A tender who dragged to recover same in February, 1919, reported it was unable to find the obstruction.

5. Boulders with depth of 42 feet near 60 ft. curve was found about 1 mile S of Pleasant View, Rhode Island shore. Soundings of former surveys in this locality are sparse, and for future wire drag work it would be well to supplement the hydrography with more soundings. (see p. 45, Vol. 2.)

Splits are indicated in pencil on sheet. The areas left undragged in the northern part of Fishers Island Sound work represents Noyes Shoal where on account of eel grass it was impossible to drag effectively. The reef east of Latimer Reef Lighthouse is left uncovered by the drag.

Plotting was done by Mr. Norman Duckworth, Apprentic Draftsman, and his experience in this class of work is rather limited. During the field season positions of drags were plotted under my supervision. The subdivision of effective depths were made with the assistance of Mr. John A. Daniels at the Boston Field Station.

Respectfully submitted,

Washington,
Mar. 10, 1919.

T. B. Williams

Chief, Wire Drag Party No. 1.

Table of Statistics Wire Drag Sheet 4043

Wire Drag Party No. 1. Year 1918.

Field Letter C.

| Day. | Date. | Length of drag. | Miles Stat. | Positions. | Retained Soundings. |
|---|---|---|---|---|---|
| A | July 15 | 1800 | 2.0 | 29 | 1 |
| B | Aug. 3 | 4000 | 2.5 | 16 | ---- |
| C | Aug. 6 | 6000 | 0.5 | 5 | ---- |
| D | Aug. 14 | 2400 and 5500 | 6.0 | 37 | ---- |
| E | Aug. 15 | 4000 | 4.0 | 15 | ---- |
| F | Aug. 17 | 5500 | 4.0 | 25 | ---- |
| G | Aug. 28 | 4000 | 2.8 | 28 | 1 |
| H | Aug. 30 | 4000 | 3.0 | 31 | ---- |
| J | Sept. 3 | 4000 | 3.0 | 49 | ---- |
| K | Sept. 4 | 4500 | 5.8 | 42 | ---- |
| L | Sept. 6 | 4500 | 1.0 | 9 | ---- |
| M | Sept. 10 | 4500 and 3000 | 4.0 | 35 | ---- |
| N | Sept. 14 | 3000 | 2.0 | 21 | ---- |
| P | Oct. 14 | 6600 | 2.0 | 13 | 1 |
| Q | Oct. 15 | 5500 | 3.5 | 29 | ---- |
| R | Oct. 24 | 2000 | 3.5 | 42 | ---- |
| S | Oct. 26 | 2000 | 2.0 | 25 | ---- |
| T | Nov. 4 | 2000 | 4.0 | 20 | ---- |
| U | Nov. 5 | 1800 | 0.5 | 9 | ---- |
| V | Nov. 6 | 1500 | 3.0 | 50 | ---- |
| W | Nov. 8 | 1000 | 3.3 | 46 | ---- |
| X | Nov. 9 | 1000 | 3.0 | 37 | ---- |
| Y | Nov. 13 | 1000 | 4.0 | 49 | ---- |
| Z | Nov. 15 | 1000 | 1.0 | 15 | 1 |
| A' | Nov. 20 | 1000 | 1.0 | 20 | ----- |
| | | Totals | 71.4 | 697 | 4 |

ADDRESS THE SUPERINTENDENT
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON May 5, 1919.

HYDROGRAPHY ETC., (HT)

FIELD RECORDS (C)

SECTION OF FIELD RECORDS
MAY 7 1919
RECEIVED

Division of Hydrography and Topography: HCG

Division of Charts:

Tidal reductions have been approved in
4 volumes of Wire Drag records for

HYDROGRAPHIC SHEET 4043

Fishers Island and Block Island
Sounds, N. Y., R. I., and Conn.
F. B. T. Sieme in 1918.

Plane of reference is
Mean low water, reading

1.8 ft. on staff on Chesebro's Wharf, Stonington
1.9 ft. " " " Hallets Wharf "
2.3 ft. " " at Little Gulf Island

R T Lee

Chief, Section of Tides
and Currents.

# Wire Drag Sheet No 4043

On the greater part of the work, in Block Island Sound, the ground is very well covered except for three fairly large splits and one small split made neccessary by a submerged navigation buoy. The work joins up well with H.D. 4042 on the south, but does not make a good juncture with H.D. 4008-a on the west.

There are numerous splits in the work in Fishers Island Sound. Some of these are shoals which could not be covered with the drag. The western limits of the work here, do not join with H.D. 4008-a

There are a number of places where the drag was aground or touching bottom at which no sounding was obtained. Some of these will probably be indicated on the sheet after it has been reviewed.

Soundings found by the drag should have been recorded in a separate sounding record book instead of being scattered through the drag records.

The mechanical part of the plotting done on the sheet, such as protracting and turning off angles and distances was very well done, but the hook ups were not correctly plotted. The rule of one to forty was not observed in the subdivision, but it was not thought advisable to revise the sheet in order to make it conform with this rule.

Some supplemental soundings, which were taken from the guide launch while the drag work was in progress, were plotted on a separate tracing which was registered as Hyd 4043-a

R L Johnston

Hyd Sheet No 4043a

While the drag work was in progress, some supplemental soundings were taken by the guide launch.

In order that these soundings would not be confused with those discovered by the wire drag, these supplemental soundings were plotted in the office on a piece of vellum, which was registered as Hyd. 4043a.

R.L. Johnston

E.O.S.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 4-DRM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON November 19, 1925.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet No. 4043

Fishers Island and Block Island Sounds

Surveyed in 1918

Instructions dated April 13, 1918 (to J. H. Hawley), June 7, 1918, August 22, 1918.

Chief of Party, F. B. T. Siems.

Surveyed by F. B. T. S.

Protracted and inked by N. Duckworth.

Verified and Area and Depth Sheet by R. L. Johnston.

1. The depth of dragging in Block Island Sound conforms to the requirements of the specific instructions except that in some cases inside the 10 fathom curve the drag was not set to within 3 feet of the bottom.

   In Fishers Island Sound, the depth of dragging generally conforms to the specific instructions yet there are a number of instances where the drag was not set to within 3 feet of the bottom. The most important of these is the area dragged to 8 feet near the western part of Noyes Shoal. The sailing directions given in the Coast Pilot for entering Stonington Harbor from the southwestward pass through this area and inasmuch as vessels of 11 ft. draft at low water can be accommodated in the harbor it is obvious that the depth mentioned should be increased. Other less important instances are the following:

   a. The passage to the north of Latimer Reef where the charted depths range from 25 to 45 ft. and the effective depths from 8 to 24 ft.

   b. The 17, 19 and 27 ft. areas about 1/2 mile northeast of Latimer Reef in charted depths of 48 and 49 ft.

   c. The 18 and 19 ft. areas in latitude 41° 18 1/2', longitude 71° 57' in depths of 40 to 60 ft.

GPO

Before any additional dragging is done here, reference should be made to Chart 358 which is on the same scale as the Area and Depth sheet, to determine what areas warrant a deepening in effective depth.

2. The extent of dragging in Block Island Sound satisfies the specific instructions.

In Fishers Island Sound the work was not extended in all cases to the 3 fathom curve particularly in the area east of Ram Island and the area north of Fishers Island. Also there was no junction made with the work in Block Island Sound to insure a safe passage through Fishers Island Sound.

3. The least water was found over all important shoals discovered except the following:

a. The 16 ft. sounding in lat. 41° 18 3/4', long. 71° 57 1/2' was not cleared. This is a pinnacle rock and it is extremely important that the least depth be ascertained over it as it lies in a direct line for entering Stonington Harbor from the southwestward as given in the Coast Pilot sailing directions.

b. The 12 ft. spot in lat. 41° 19 1/2', long. 71° 57' was not cleared.

c. The 12 ft. sounding on Noyes Shoal in lat. 41° 19', long. 71° 55 1/4' was cleared by an 8 ft. drag.

d. The 44 ft. sounding in lat. 41° 18 1/2', long. 71° 49 3/4' and the 42 ft. sounding in lat. 41° 18 1/2', long. 71° 48 1/4' were not cleared. Both of these are about a mile offshore and should be covered when the work is extended inshore.

e. The 34 ft. sounding in lat. 41° 17', long. 71° 54 1/2' was not cleared. There is a large split in the work around this spot and both should be covered whenever work is resumed here.

f. The 40 ft. sounding (grounding depth) in lat. 41° 18 1/4', long. 71° 50 3/4' was not cleared. The drag grounded at position 2 G at buoys N-1 but nothing is subsequently said about lifting the drag to clear. It may be that the drag cleared itself or that it was just touching bottom. However, a 40 ft. sounding will be shown here and an exaggerated split around it.

g. The 42 ft. sounding (grounding depth) in lat. 41° 14 3/4' long. 72° 00 1/2' was not cleared on this sheet, but was covered by a 28 ft. drag on H. 4008[a].

h. The 17 ft. sounding (grounding depth) in lat. 41° 19', long. 71° 55' was cleared by a 17 ft. drag but with an insufficient overlap. The F buoy was apparently just touching bottom.

i. The 17 ft. sounding (grounding depth) in lat. 41° 19 1/2', long. 71° 55 1/2' was not cleared, but the drag slipped over the shoal while waiting to investigate it. It would appear that Noyes Rock Shoal extends further into the channel than is now shown on the chart. The spot should be investigated.

j. The 19 ft. sounding (grounding depth) in lat. 41° 18 1/2', long. 71° 54 1/2' was not cleared. This lies in the approach to Stonington Harbor from the southeast.

k. The 34 ft. sounding (grounding depth) in lat. 41° 18', long. 71° 57 1/4' was not cleared. This should be covered when the work with the adjoining sheet is connected.

l. The 24 ft. sounding (grounding depth) in lat. 41° 18 3/4', long. 71° 56 3/4' was not cleared. The drag was lifted over this shoal.

m. The 8 ft. sounding (grounding depth) in lat. 41° 19', long. 71° 56' was not cleared. This grounding at position 20 T, although not noted at what buoy, was assumed to have been on Noyes Shoal and the sounding is shown in the most probably position.

4. The least water was not found over the following previously charted shoals:

a. The 15 ft. shoal about 1/2 mile south of the eastern end of Latimer Reef. This spot was not dragged at all. It is important in so far as it lies near the passage used by boats in going from Block Island Sound into Long Island Sound.

b. The 13 ft. shoal about 1 mile south of the above mentioned 15 ft. spot was not dragged over. This lies near the south side of the used through passage.

5. The soundings taken in conjunction with this work and shown on a tracing marked H. 4043[a] are not supplemental hydrography but are soundings taken from the guide launch during the progress of the work. These have already been charted.

6. The overlaps within the sheet are generally sufficient.

The junction with H. 4042 on the south is adequate.

No junction was effected with H. 4008[a] in Fishers Island Sound and in the area south of the west end of Fishers Island.

7. This sheet is far from being complete. There are a number of important splits that should be dragged when work is resumed. These are all clearly indicated on the Area and Depth sheet. Before outlining any additional work for this locality this sheet should be compared with chart 358 which is on the same scale. A few of the more important areas to be dragged will, however, be here mentioned:

a. A proper junction should be made between the work in Block Island Sound and that in Fishers Island Sound through Watch Hill Passage, the principal used entrance.

b. An adequate junction with H. 4008[a] to make the work continuous.

c. The large split around Latimer Reef.

d. The important splits near the west end and center of Noyes Shoal, the former being in the path of boats entering Stonington Harbor from the southwest.

e. The split in the south entrance to Stonington Harbor and extending the drag eastward closer to the 18 ft. curve.

f. In Block Island the drag work should be extended inshore to the 3 fathom curve.

g. The split about 1 mile southeast of East Point (Fishers Island) where 34 ft. was found.

In addition to the above consideration should be given to the various points mentioned in the preceding paragraphs.

8. Considerable changes were made by the office cartographer owing to the faulty plotting of hook-ups. The rule of forty was not adhered to in the plotting, but no changes were made on that account.

9. Attention is called to the following:

a. In the vicinity of lat. 41° 16', long. 71° 55', the drag grounded at position 5 C and also at positions 15, 16 and 17 M,

but no mention was made at what part of the drag. This area was later covered by a drag strip on N day but not with a sufficient overlap, particularly since the bights of the three drag strips came together here. There is sufficient doubt as to whether the place of grounding was actually covered and for this reason the area is marked doubtful on the Area and Depth sheet and should be investigated.

b. In a number of places the drag passed along the edge of known shoals, dragging on the ground. In all such cases the drag plotting was corrected so as to conform to the charted delineation of the shoal.

10. Reviewed by A. L. Shalowitz.

Form 537
11—5312

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

# HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 4043 Field letter "C" incomplete

State Connecticut, New York, & Rhode Island.

General locality NEW ENGLAND COAST.

Locality Fishers Island Sound & Block Island Sound.

Chief of party F.B.T. Siems.

Surveyed by F.B.T. Siems.

Date of survey July 15, 1918 to November 20, 1918.

Scale 1/20,000.

Soundings in feet.

Plane of reference Mean Low Water.

Protracted by Duckworth. Soundings in pencil by F.B.T.S.

Inked by Duckworth. Verified by

Records accompanying sheet (check those forwarded):

Des. report, ..... Tide books, ..... Marigrams, 1 ✓ Boat sheets,

none Sounding books, 4 ✓ Wire-drag books, 4 ✓ Envelopes containing drag strips. ~~Photographs~~.

Data from other sources affecting sheet triangulation F.B.T.S. 1918; Wire Drag work of F.B.T.S. 1918, sheet "D". Wire Drag work of J.A Daniels 1918 Fishers Island Sound 1918 plotted on another sheet.

Remarks: This sheet can be used for future wire drag work in this locality.

Applied to 362 RDG 10/27/49