6460
WIRE DRAG

6460
WIRE DRAG

Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Wire Drag
~~Topographic~~
Hydrographic

Sheet No. 6460A

6460A

L.O. Colbert

State New York

LOCALITY

New York Harbor

Pier 7

Constable Hook

1939.

CHIEF OF PARTY

F.S. Borden

U. S. GOVERNMENT PRINTING OFFICE 1022281

Form 537
Ed. Dec. 1930

REG. NO.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC 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.

Field No. 51

REGISTER NO. H - 6460A
H - 6460B (Wire Drag)

State New York

General locality Constable Hook

Locality Approaches To Pier 7

Scale 1-5000 Date of survey Sept.-15-19, 19.39.

Vessel Launches Marindin, Rodgers and Surf Boat

Chief of Party F.S. Borden

Surveyed by K.S. Ulm, J.C. Bull

Protracted by J.T. Burke, K.S. Ulm

Soundings penciled by J.T. Burke

Soundings in ~~fathoms~~ feet Drag depths in feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by K.S. Ulm

Inked by K.S. Ulm

Verified by H.F. Stegman

Instructions dated August 1, 19.39.

Remarks: Sheet H-6460A - Hydrography

Sheet H-6460A - Wire Drag

U. S. GOVERNMENT PRINTING OFFICE

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SHEET H-6460A AND WIRE DRAG SHEET H-6460B (1939)

AUTHORITY

Instructions for Project H.T.-237 dated August 1, 1939, signed L.O. Colbert, Director.

CHARACTER OF WORK

Sheet H - 6460A (1939) is a hydrographic survey of the approaches to Pier 7, Constable Hook, New York Harbor. Sheet H - 6460B (1939) is a wire drag investigation of a shoal reported in the above area by S.S. Singkep. A copy of which is attached to this report. A and B sheets have been combined as one.

The scale of these sheets are 1 = 5.000.

The hydrography was in accordance with the instructions and standard practice described in the Hydrographic Manual consisting of hand-lead soundings controlled by visual fixes.

The wire drag was in accordance with the instructions and standard practice described in the Wire Drag Manual. Dual control and visual fixes were used throughout.

Effective depths range from 21 to 25 feet.

CONTROL AND DATUM

The sheets are on the North American 1927 datum. Triangulation stations used were of 1930. U.S.E.D. stations were recovered and plotted from Air Photo Compilation Sheets Nos. T - 5468 (1935) and T - 5466. (1935) These signals are shown in green on the smooth sheets. Signal NEW which is a tank was located by sextant cuts while signal HIM which is a range beacon was located by a sextant position and check angles.

DATE OF SURVEY

Four days of work was done on these sheets from September 15, to September 19, 1940.

TIDE REDUCERS

Tide reducers were obtained from the hourly heights of the standard gage at the Battery, New York City, supplied by the Division Of Tides. No time or range corrections were made in accordance with the letter of May 16, 1940, signed by, J.H. Hawley, Acting Director.

DANGERS

About 27 meters west of NUN Buoy 4 (Latitude 40° 39.34', Longitude 70° 04.97') inside the channel there is what appears to be a sunken barge with from 13 to 15 feet of water at M.L.W. over it. Position ld

to 8d were taken while drift sounding in order to determine the limits of the obstruction.

DISCREPANCIES

Two wrecked barges (ϕ 40° 39.4, λ 70° 04.1) lie about 82 meters Northeast of NUN Buoy 4 in comparatively shoal water. Position 5b marks the Southwest end and position 46d marks the North east end of the barges. At position 5b the recorder neglected to make any notes concerning the barges which wasn't discovered until the sheet was smooth plotted. However the plotter in the field showed a wreck symbol on the boat sheet at position 5b. During the work these barges were smouldering and it is probably in time that they may burn to the waters edge.

WIRE DRAG GROUNDING

The drag was set out on position 13A with an effective depth of 24 feet. Before a second position could be taken the drag fetched up against an obstruction and parted. Therefore no drag strip could be shown for this grounding. However in grounding a portion of the ground wire hung on the obstruction and it was possible to get a position (27a) and a sounding 23 feet at M.L.W.. This obstruction was a hard lump and seemed very small in area. This spot was cleared without grounding by an effective depth of 23 feet between positions 8A - 12A. This may be explained by the fact that if the obstruction was quite smooth which is the way it felt while sounding on it. That the ground wire having the same effective depth as the sounding could have very easily sliped over it with out being noticed on the surface. Later this spot was covered by 21 feet effective depth between positions 14A and 17A. It is recomended that the area covered by 23 feet effective depth be retained.

POS. NO. LETTER DAY	LATITUDE & LONGITUDE	GROUNDED EFFECTIVE DEPTH	LEAST SOUNDING DEPTH	CLEARED EFFECTIVE DEPTH	DEPTH PLOTTED
27a	40°-39.23' 74°-04.86'	24'	23'	23' & 21'	23'

GENERAL

In reviewing the wire drag sheet it will be well to bear in mind that the work was done in a comparatively small area where only short drags could be used, fully exposed to strong currents and heavy traffic. It is recomended if additional work is to be done in this area or similar areas that smaller boats be provided. The Launches MARINDIN and RODGERS are too large to handle with efficiency in a congested area where a short drag is necessary.

The following notes on the plotting of the wire drag sheet may be of value to the verifier or reviewer.

End launch positions were plotted in the field on the hydrographic boat sheet.

At the begining and end of all drag strips from Position 1A to 12A all buoys were located by the tender and a sounding taken. These have been plotted on the drag sheet.

On the strip from 1A to 6A buoys 3,4,and N were aground throughout the operation. The position of buoy 3 at begining and end of the operation differed by only a small amount, see positions 3a and 10a tender record. So the begining of the line was taken from Position 1.4A to 10a. Between these points the buoys were afloat with no evidence of grounding. At points in this strip the distance is a few meters longer than the distance between Buoys 3 and N. This may be accounted for by the fact that buoy 3 could have been dragged that small distance towards N. At 6A, N went aground however buoys 1 and 2 remainded afloat. N was dragged over the shoal in order to get a maximum coverage with buoys 1 and 2. The end of the line is shown from position 6A to the position of the buoys opposite Position 7A. The area claimed therefore is from Position 6A to 8a to 9a to 10a.

At position 8A buoys 1 and 2 were aground. Buoy 1 came afloat at Position 9.2A where line begins. At the time buoy 2 was aground at the edge of a known shoal and it was thought that it could be pulled off however at position 11A the drag was in a perfect V and it was necessary to send the tender to clear the buoy whose weight was stuck in the mud. When this was done the drag continued with the guide launch pulling to the Southeast to straighten out the drag to cover the channel area which it did at Position 12A. The only position of this area which might be considered as a split is at the point where Buoy No. 2 was cleared from the mud. According to the drag master the buoy was nearly on the edge of the shoal and the buoy distance involved in clearing the buoy was only a few meters which I believe can be considered negligible.

SPLITS

See preceeding paragraph.

COMPARISON WITH PREVIOUS SURVEYS AND CHART

No previous surveys were available so no comparison has been made. With chart 541 the soundings agree with the exception of the channel approaching Pier 7 and the slip alongside Pier 7. Here the water is 2 to 5 feet shoaler then shown on the chart.

EQUIPEMENT AND PERSONNEL

The surf boat (wire drag tender) was used for the hydrography.

Standard Wire drag equipement was used. Launch MARINDIN was used as the Guide Launch and Launch RODGERS as the end launch. Lieut(j.g.) K. S. Ulm was in charge of this work and the guide launch. Ensign J.C. Bull was in charge of the end launch. The hydrography was done by both of the above officers. Mr. F. Okeson was in charge of the hydrography taken along the wharf faces.

REPORT

The wire drag grounding at position 27a and the shoal sounding discussed inthis report under the paragraph headed DANGER were reported by letter of September 21, 1939 to the Director. A copy which is attached to this report. Chart Letter 581 (1939)

Respectfully Submitted

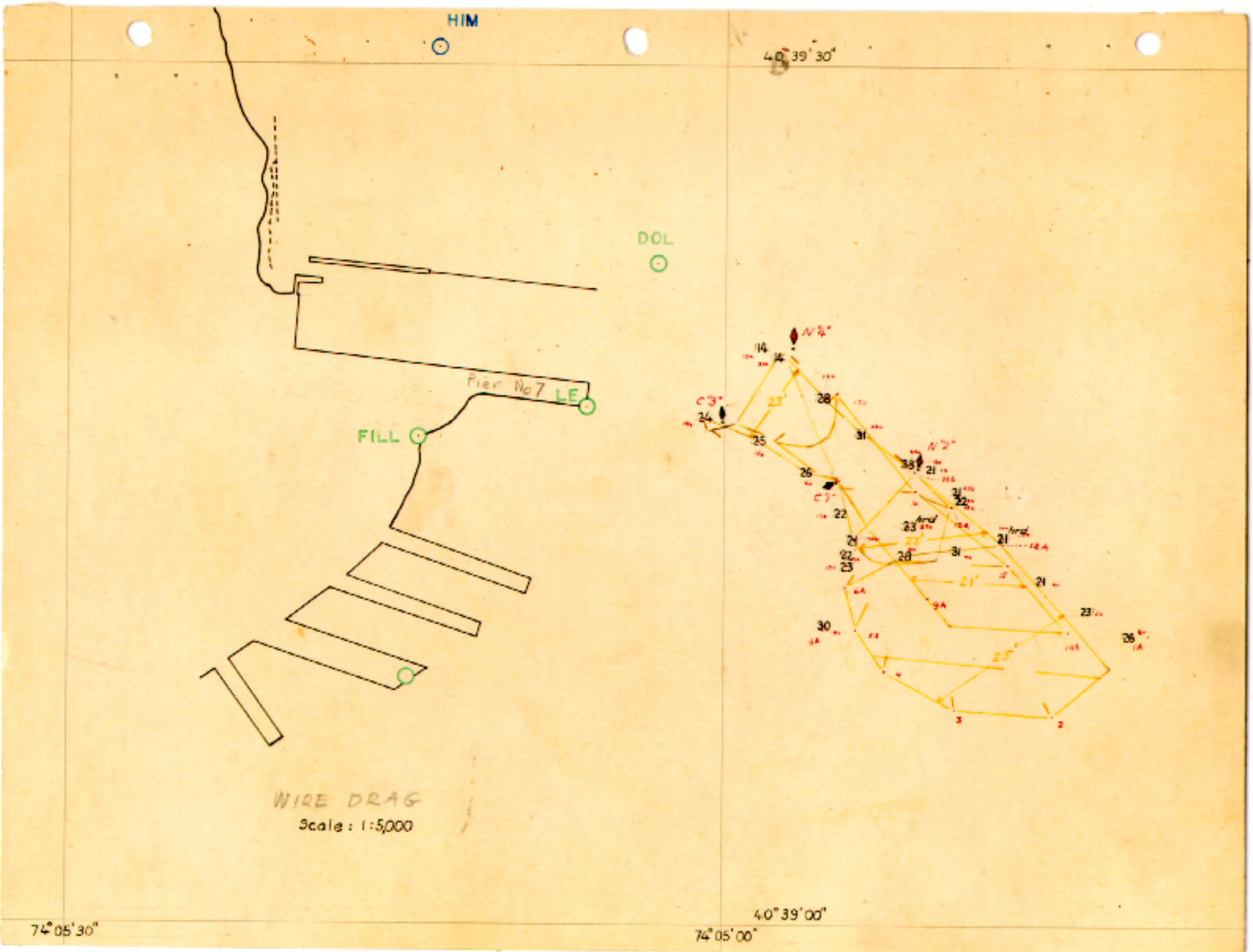
Kenneth S. Ulm

Kenneth S. Ulm
Lieut.(j.g.) C. & G. Survey

Forwarded:

John H. Brittain

John H. Brittain
In Charge, Norfolk Processing Office.



WIRE DRAG

Scale : 1:5,000

LIST OF SIGNALS
TO ACCOMPANY SHEET 6460

TRIANGULATION	HYDRO*NAME
New Brighton St. Peter Catholic Church Tower 1930	Ton
Robbins Reef Lt. House 1930 - 1931	Rob
Standard Oil Co. N. Tall Twin Chimney 1930	Stan
Standard Oil Co. S. Tall Twin Chimney 1930	Oil
St. George Ferry B'ld'g Cupola 1930	Cup

AIR PHOTO COMPILATION N-T-5468

Dolphin		Dol
Lehigh Valley	USED	Le
S.O. Fill Sub	USED	Fill

AIR PHOTO COMPILATION N-T-5466

B & O Pier No.6 Sub No.1 USED	Sub

SIGNALS LOCATED BY SEXTANT

Range Beacon	Him
Tank	New

STATISTICS
TO ACCOMPANY
SHEET 6460A (1939)

Letter Day	Date (1939)	Statute Miles	Soundings	Positions	Volume No.
a	Sept. 15	0.3	95		1
b	" 16	8.1	751	143	1
c	" 17	7.8	716	131	1 & 2
d	" 19	2.2	158	145	1
TOTAL FOR SHEET		18.4	1720	319 ~~419~~	

Area = 0.2 Square Statute Miles.

WIRE DRAG SHEET 6460B (1939)

Date (1939)	Letter Day	Volume No.	Statute Miles	Positions	Drag Length Feet	Tender Soundings	Tender Positions
Sept. 19	A	1	0.9	37	1000 400	26	27

Area = 0.05 Square Statute Miles.

80-LEF

November 7, 1940.

To: Lieutenant (j.g.) K. S. Ulm,
U. S. Coast and Geodetic Survey,
Ship LYDONIA,
c/o Postmaster,
Norfolk, Virginia.

Through: Commanding Officer, Ship LYDONIA.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Hydrographic Survey H-6460.

A question has arisen during the verification and review of hydrographic survey H-6460 concerning the 13 foot sounding obtained by the wire drag tender at position 26a, in latitude 40° 39.25', longitude 74° 04.77'. It is believed that the sounding may be a leadsman's error of one fathom and it is requested that you furnish this office with any further information you may have concerning this sounding, and your recommendation as to its disposal. No mention of this sounding was made in the descriptive report of the survey.

There is enclosed a photostat showing the hydrographic and wire drag surveys, and the wire drag tender sounding record involved.

(Signed) J. H. HAWLEY

Acting Director.

Copy to Ensign John C. Bull.

80

POST-OFFICE ADDRESS: c/o Postmaster, Norfolk, Va.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

1940 NOV - 13 - PM 12:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

Ship LYDONIA

November 12, 1940.

To: The Director,
U. S. Coast & Geodetic Survey,
Washington, D. C.

Through: Commanding Officer,
Ship LYDONIA.

From: Lieut. (j.g.) Kenneth S. Ulm,
U. S. Coast & Geodetic Survey.

Subject: Hydrographic Survey H-6460.

Reference: 80-LEF.

In reference to the verification of the 13 foot sounding on hydrographic survey H-6460 in latitude 40°-39.25', longitude 74°-04.77', I recommend that this sounding be rejected, as I believe that an error was made in recording or in transferring the sounding to the smooth tender record. This opinion is based on the fact that the tender soundings were carefully checked against the hydrographic boat sheet while in the field and further investigation would have been made if the discrepancy had been noted .

During the survey heavy traffic drawing thirteen feet or more was noted passing over this area and also ships and barges anchored in the vicinity. The writer feels that if an obstruction existed that groundings in this area would have been reported.

Kenneth S. Ulm

Kenneth S. Ulm
Lieut. (j.g.) C&GS

Approved and forwarded:

H. Arnold Karo

H. Arnold Karo, Lieut. C&GS
Commanding Ship LYDONIA.

Rejection of 13 foot sounding approved.

F. S. Borden
Chief of Division of Charts.

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. ..H6460 **Wire Drag**

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

Number of positions on sheet	383
Number of positions checked	61
Number of positions revised	2
Number of soundings recorded	1746
Number of soundings revised	23
Number of soundings erroneously spaced	2
Number of signals erroneously plotted or transferred	None

Date: Oct 25 1940

Verification by H.F. Stegman Time: 46 hrs.

Review by Harold W. Murray Time: 12 "

2629

HYDROGRAPHIC SURVEY NO. H6460 Wire Drag

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 3 Vols., Wire Drag 2 Vols., Bomb ___ Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes

Landmarks for Charts (Form 567) No

Statistics Yes

Approved by Chief of Party F. S. Borden

Recoverable Station Cards (Form 524) No

Special Chart for Lighthouse Service (Circular Nov.30, 1933) Yes

Hydrography: Total Days 4 ; Last Date Sept. 19, 1939

Remarks

3776

	Remarks	Decisions
1		406740 U.S.C.O.
2		
3		
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27		
M 234		

GEOGRAPHIC NAMES

Survey No. H6460

(Wire Drag)

Name on Survey	On Chart No. A,	On previous survey No. B,	On U. S. quadrangle Maps C,	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Constable Hook										1
										2
										3
										4
										5
										6
										7
										8
										9
										10
										11
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										26
										27

Names underlined in red approved by L. M. Hack on 10/31/40

M 234 1R

COPY OF A COPY

R.JONKER
25 Broadway
New York

June 6, 1939.

U.S. Coast And Geodetic Survey,
New Federal Building,
90 Church Street, Room 620,
New York City, N.Y.

Dear Sirs:

On May 22 at 4:00 P.M. the S.S. "SINGKEP" left Pier 7 Constable Hook, backing out by way of the Constable Hook Channel with the assistance of two tugboats.

At about 4:15 P.M. after having passed the outer buoys marking the Channel and about 200 meters away from the buoys, the vessel touched bottom or struck some submerged object. At that time the two red buoys were will open, which accqrding to the Geodetic Chart would indicate that there was suffidient water for the vessel to navigate, her draft being only 21-1/2 or 22 feet.

Subsequent soundings were taken by the U.S. Engineer's office and also the four buoys carefully located which would indicate that there is either not so much water as the Chart would indicate or that perhaps one or more buoys have drifted.

Purpose of this letter is to suggest that a survey be made of this area.

Looking forward to your findings with great interest, I remain,

Yours very truly,

(sgd.) R. JONKER

RJ:NvdM

Copy of Chart Letter 581 (1939)
Mr. Ulm:—
Please attach this or copy of it to Descriptive Report on the Sheet covering this project.
FSB.

POST-OFFICE ADDRESS: General Delivery, Norfolk, Va.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

September 21,1939.

To: The Director
U.S. Coast & Geodetic Survey
Washington, D.C.

From: Kenneth S. Ulm
Lieut. (j.g.) U.S.C. & G.S.
General Delivery
Norfolk, Va.

Subject: Obstruction Pier 7, Constable Hook.

The hydrographic and wire drag survey of item 1, Project HT 237 has been completed according to instructions of August 1,1939.

Two obstructions were found. The first 12' at M.L.W. bears 78° true distance 191 meters from the northeast corner of Pier 7, Constable Hook. This appears to be a barge laying with the channel about 30 meters west of #4 red nun buoy in general depths of 25 feet. The second is a 23 feet at M.L.W. This bears 114° true distance 381 meters from the northeast corner of Pier 7, Constable Hook. This is a small hard bump laying in general depths of 29 feet and was cleared with 21 feet effective depth.

Kenneth S. Ulm
Lieut. (j.g.) U.S.C. & G.S.

Copy to: Commanding Officer
U.S.C. & G.S.S. Oceanographer

Inspector, New York Field Station

Mr. J.F. Leddy, Standard Oil Company.

8841

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

No. H H6460
~~No. 1~~

received June 14, 1940
registered June 21, 1940
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25	✓	HBV	Pages 1 + 2
26			
30			
40			
62			
63			
82			
83	✓	CKG	Pages 1 & 2
88			
90			

RETURN TO

82	T. B. REED

✓ JJBR

RAC
GBL

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Ed. Feb. 1935

TIDE NOTE FOR HYDROGRAPHIC SHEET

July 5, 1940

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. H. R. Edmonston

Tide Reducers are approved in
5 volumes of sounding and wire drag records for

HYDROGRAPHIC SHEET 6460

Locality Constable Hook, Approaches to Pier No. 7, New York Harbor

Chief of Party: F. S. Borden in 1939
Plane of reference is mean low water reading
2.8 ft. on tide staff at The Battery
19.2 ft. below B.M. 748

Height of mean high water above plane of reference is 4.4 feet

Condition of records satisfactory except as noted below:

Paul A. Whitney

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H

Verified and Inked by H.F. Stegman Date October 25, 1940

1. The descriptive report was consulted and appropriate action taken.

2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude.

3. All references to survey sheets mentioned in the descriptive report include the registry number and year.

4. Geographic names of hydrographic features are in slanting lettering and of topographic features in vertical lettering.

5. All items effecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken.

6. All positions verified instrumentally were check marked in the sounding records.

7. All critical soundings are clear and legible.

8. The metal protractor has been checked within the last three months.

9. The protracting and plotting of all bad crossings were verified.

10. All detached positions locating critical soundings, rocks or buoys were verified. See Section 33 of this report.

11. The boat sheet was compared with the smooth sheet.

12. The spacing of soundings as recorded in the records was closely followed.

13. The bottom characteristics were shown on outstanding shoals.

14. The reduction and plotting of doubtful soundings were checked.

15. The transfer of contemporary topographic information was carefully examined.

16. All junctions were transferred. *No junctions were made since H-6460 is merely an investigation of reported shoals. See Rev., par. 4*

17. The notation "JOINS H " was added for all contemporary adjoining or overlapping sheets now registered.

18. The depth curves have been drawn to include the significant depths.

19. All triangulation stations and transfer of topographic and hydrographic signals were checked by the field party.

20. Heights of rocks were checked against range of tide. *None*

21. Rocks transferred from topographic survey have a dotted curve where shown thereon.

22. Unnecessary pencil notes have been removed.

23. Objects on which signals are located and which fall outside of the low water line have been described on the sheet.

24. The low water line and delineation of shoal areas have been properly shown (see letter of October 20, 1934).

25. Degree and minutes values and symbols have been checked.

26. Source of shoreline and signals (When not given in report).

27. Depth curves were satisfactory ~~except as follows:~~

28. Sounding line crossings were satisfactory ~~except as follows~~:

29. Junctions with contemporary surveys were satisfactory except as follows:
The matter of junctions was referred to the reviewer. Disposed off. H.W.M.

30. Condition of sounding records was satisfactory ~~except as follows:~~

31. The protracting was satisfactory ~~except as follows:~~

32. The field plotting of soundings was satisfactory ~~except as follows:~~
The field plotting was done on two sheets, one for wire drag and one for hydrography. The verifier transferred the wire drag strips to the hydrographic smooth sheet, and plotted tender positions 26a* and 27a on the hydrographic smooth sheet. The wire drag smooth sheet was then trimmed to paper sheet size and inserted in the Descriptive Report.

*removed. See Rep., par. 7.

33. Notes to reviewer:
The location of buoy N-"2" (ϕ- 40°-39.28 λ- 74°-04.45) is doubtful since the check angle does not check the position of the two fix angles. This buoy was not plotted on the boatsheet. The plotting of the buoy is left to the reviewer for disposition. Used mean of three angles. H.W.M.

Oct. 25, 1940

H. F. Stegman

DIVISION OF CHARTS

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6460 (1939) FIELD NO. 51

New York, Constable Hook, Approaches to Pier 7
Surveyed in September 15-19, 1939, Scale 1:5,000
Instructions dated August 1, 1939 (OCEANOGRAPHER)

Soundings:
Hand Lead
Wire Drag

Control:
Three point fixes on shore signals.

Chief of Party - F. S. Borden.
Surveyed by - K. S. Ulm and J. C. Bull.
Protracted by - J. T. Burke and K. S. Ulm.
Soundings plotted by - J. T. Burke.
Verified and inked by - H. F. Stegman.
Reviewed by - Harold W. Murray, October 25, 1940.
Inspected by - H. R. Edmonston.

1. Shoreline and Signals.

The origin of the shoreline and signals is given in the Descriptive Report, page 1.

2. Sounding Line Crossings.

Agreement of such cross lines as result from the work are satisfactory.

3. Depth Curves.

The usual depth curves may be satisfactorily drawn.

4. Junctions with Prior Surveys.

H-5607 and H-5609 of 1934 join the present survey limits but since these surveys have been superseded in part by later Army Engineers' surveys, the junction of the 1934 work is not being considered except a small portion north of the long breakwater on the northwest where the agreement with H-5609 (no soundings transferred) is very good.

The junctions with the charted soundings originating with Army Engineers' surveys blue print 30294 of 1935-36, blue print 31934 of 1938, blue print 30170 of 1937, and blue prints 33066 and 33067 of July 1939 on the northeast, east and south is very good.

5. Comparison with Prior Surveys.

Inasmuch as H-5607 and H-5609 of 1934 are considered basic surveys, prior surveys previous to 1934 are not being considered since they have been already considered in the review of the 1934 work.

Comparison with the above 1934 surveys shows good agreement in some areas but in others the present survey depths are 1 to 8 feet shoaler. The outstanding changes are in the main channel leading to the northwestward where the present survey now shows a controlling depth of 26 to 27 feet in an area where depths of 31 feet (charted) were formerly obtained.

In lat. 40° 39.27', long. 74° 05.05', a 10 foot sounding with the notation "Rk" falls inside a small area enclosed by the 12 foot curve on the present survey and has been carried forward. The present survey with this addition supersedes the 1934 work.

6. Comparison with Chart 541 (New Print dated July 9, 1940)

a. Hydrography.

Hydrography shown on the chart originates with surveys discussed in the previous paragraphs and other miscellaneous information.

(1) Army Engineers surveys: Blue print 17480 of 1918, scale 1:5,000; blue print 30294 of 1935-36, scale 1:5,000; blue print 31934 of 1938 on a scale of 1:12,000, and blue prints 33066 and 33067 of July 1939. Agreement of the charted depths is good in some areas but in others the present survey indicates a shoaling of 1 to 5 feet in some cases and a deepening of 1 to 3 feet in others.

The charted 9 foot sounding in lat. 40°39.28' long. 74°05.06', originates with blue print 17480 of 1918. It is a single sounding on line falling in depths of about 15 feet on the present survey but between sounding lines spaced 20 m. apart. Since the present survey shows a small shoal area enclosed by the 12 foot curve just southwestward which includes a 10 foot sounding obtained on a rock, it is advisable to retain this sounding on the chart.

A charted 29 foot sounding in lat. 40°39.15' long. 74°04.76', originating with blue print 30170 of 1937 falls in depths of 35 feet on the present survey. It should be retained on the chart as there is no conclusive evidence that it does not exist especially since the present survey confirms another 29 foot spot on the Engineers' survey about 45 m. southwestward.

With the exception of the 9 and 29 foot soundings and the areas where good agreement is noted, the present survey supersedes the above Army Engineers' surveys.

(2) The charted 12 foot sounding with notation "obstruction" in lat. 40°39.34', long. 74°04.97' and the 23 foot depth in lat. 40°39.23', long. 74°04.86', originate with Chart Letter 581 of 1939 and are advance information of the present survey forwarded by the field party. The 23 is in agreement with the present survey information and no further consideration is necessary. The 12 obtained on the obstruction (probably sunken barge) is from the boat sheet. It should be superseded by the 13 foot depth shown on the smooth sheet.

b. Controlling Depths.

The charted controlling depth in the channel on the northeast is 20 feet as of February 1939. The present survey development is in agreement with this information except that in lat. 40°39.25' long. 74°04.57', the present survey shows a depth of 19 feet. This depth is approximately 20 m. from the southern limits of the channel.

c. Aids to Navigation.

The aids located on the present survey agree within 60 m. with the charted positions. The larger differences, however, are in a direction parallel to the axis of the channel. These aids satisfactorily mark the features intended except that the 13 and 19 foot depths discussed in paragraphs 6a(2) and (b) are not adequately marked. The charted red buoy, N4, if shifted about 30 m. to the southwest will dispose of the 13 foot spot. Dredging out of the 19 will eliminate any change in the buoys marking the southern limits of this channel and at the same

time preserve the standard width extending for a considerable distance to the northeastward.

7. Wire Drag Development.

The channel leading northwestward was wire dragged to effective depths of 23 to 25 feet. A 23 foot spot, hard lump, was found in depths of 28 feet in lat. 40° 39.23', long. 74°04.86'. It was cleared with a 23 foot drag strip. In lat. 40°39.25', long. 74°04.77', the drag tender obtained a detached unverified sounding of 13 feet in general depths of 20 feet. Correspondence with the hydrographer (see letters dated Nov. 7 and 12, 1940, attached to descriptive report), states that this sounding is undoubtedly in error and the 13 has, therefore, been rejected.

8. Condition of Survey.

a. The sounding records are neat and legible and conform to the requirements of the Hydrographic Manual. It is desirable, however, that all soundings taken by the wire drag tender be accompanied by bottom characteristics.

b. The descriptive report is clear and comprehensive and satisfactorily covers all matters of importance.

c. The field protracting and plotting of soundings were very good.

9. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project.

10. Additional Field Work Recommended.

This is an excellent survey and no additional field work is necessary.

11. Superseded Surveys.

H-5607 (1939) in part H-5609 (1939) in part.

Examined and approved:

Thos. B. Reed,
Chief, Section of Field Records.

Chief, Division of Charts.

Chief, Section of Field Work.

Chief, Division of H. & T.

Applied to Ch+ 285 — 1/16/41 P.B.C.