

6562

Form 504
Rev. April 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } Sheet No. H-6562

State Massachusetts

LOCALITY

Cape Cod Bay

~~Sagamore Beach to~~ Indian Hill
to Sagamore Beach

1930.

CHIEF OF PARTY

H. Arnold Karo

6562

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H6562

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. 12

REGISTER NO. H-6562

State Massachusetts

General locality Cape Cod Bay

Locality Indian Hill to Sagamore Beach
~~Sagamore Beach to Indian Hill~~

Scale 1:10,000 Date of survey September, 1940

Vessel Motor-sailer - LYDONIA

Chief of Party H. Arnold Karo

Surveyed by Harry F. Garber

Protracted by D. M. Stanley

Soundings penciled by D. M. Stanley

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by

Inked by A. R. STIRNI

Verified by A. R. STIRNI

Instructions dated March 8, 1940 and July 26, 1940

Remarks:

DESCRIPTIVE REPORT
to
ACCOMPANY HYDROGRAPHIC SHEET NO. H-6562 (FIELD NO. 12)
Scale 1:10,000
Project No. HT-248 Cape Cod Bay, Mass.
Ship LYDONIA H. Arnold Karo, Chief of Party

INSTRUCTIONS:

This survey was executed under authority of Director's Instructions for Project No. HT-248 dated March 8, 1940 and Supplemental Instructions dated July 26, 1940.

LOCALITY:

This survey covers the inshore area along the west side of Cape Cod Bay from latitude $41^{\circ} 48' N$ to latitude $41^{\circ} 53' N$ and extends offshore for a distance of about one mile.

CONTROL AND SIGNALS:

Triangulation control previously established and additional triangulation control established this season by the LYDONIA furnished the primary control for this survey. Signals consisted of these triangulation stations and additional natural objects and topographic signals located by topography.

SURVEY METHODS:

The usual visual control method of three-point fixes was used throughout. The shoal water portable recording fathometer, type 808, was used for soundings. Some difficulty was had in maintaining proper speed regulation of the fathometer and it was necessary to apply a correction to the fathometer soundings where the speed was found to be out. This is covered in a separate report. Some of the cross-lines were run using the hand lead in order to obtain bottom characteristics.

In making this survey, the fathometer was attended constantly, one of the junior officers being detailed for this work. Soundings were read at regular intervals and at such additional times as was necessary. The echo from kelp and seaweed gave trouble in the areas where found. It is believed that all questionable soundings were investigated and the proper reading recorded.

The initial was set so that the bar test agreed. This also agreed with the draft of the "fish" and no corrections for temperature or salinity were applied. Satisfactory bar tests were hard to obtain at times due to the choppy water.

The twenty-six foot motor-sailor of the LYDONIA was used for all sounding work, the fish being rigged from the port side of the forward cock-pit and the recorder being installed in the after cock-pit.

DISCREPANCIES:

In general the soundings agreed very well. The following discrepancies were noted.

1. Pos. 33a - 34a and 135b - 136b; discrepancy of three feet. A slight displacement would bring the soundings into agreement. $\phi 41^{\circ}48.3, \lambda 70^{\circ}31.8$
Soundings read wrong on roll, improved.
2. Pos. 164a to 169d - a hand lead cross-line. The soundings appear to be from one to two feet too deep. It is recommended that the shoaler soundings on the main system of sounding lines be charted. $\phi 41^{\circ}49.3$
Favored shoaler soundings
3. Pos. 17a^c to 20a^c - a hand lead cross-line. The soundings appear to be from one to two feet too deep. It is recommended that the shoaler soundings on the main system of sounding lines be charted. $\phi 41^{\circ}51.5, \lambda 70^{\circ}31.3$
Favored shoaler soundings
4. Pos. 25e to 26e. Soundings appear too deep. A slight displacement of position 25e to the south would bring the soundings into agreement with the soundings on the other lines in this area. $\phi 41^{\circ}48.5, \lambda 70^{\circ}31.3$
Pos. 25e out 20m, improved.
5. Pos. 142f to 143f. Soundings appear to be one to two feet too deep. Recommend that the shoaler soundings on the adjacent lines be charted. $\phi 41^{\circ}52.2, \lambda 70^{\circ}30.5$
Accepted.

COMPARISON WITH PREVIOUS SURVEYS:

In general the results of this survey agree with those of previous surveys with two exceptions. A list of the more important shoals and a comparison of the present survey with previous charted depths is given.

Latitude	Longitude	Charted depth	Depth from present survey
41° 48. 48 ³	70° 31. 29 ⁴³	17 ft.	20 ft. Rev., Par. 5a (3) ✓
41° 50.70 ⁴	70° 30.87	17 ft.	15 ²⁰ ft.
41° 51.40 ³	70° 31.28	8 ft.	9 ¹⁵ ft. " " 5a (6) ✓
41° 52.84 ⁷⁵	70° 31.46 ³⁵	22 ft.	20 ³⁰ ft. " " 5a (2) ✓
41° 50.47	70° 30.10	30 ft.	37 ³⁹ ft. " " 5a (1) ✓
41° 50.87	70° 30.10 ²	24 ft.	39 ⁴⁰ ft.
41° 52.27	70° 30.60	39 ft.	38 ft. Wire drag sdg, carried forward

Shoaler present surveys are frequently shown nearby

The zero sounding in Lat. 41° 48.38 and Long. 70° 31.89 is believed to be a large sunken rock although no mention is made in the record. A large sunken rock is reported to be in this vicinity which would probably be this zero sounding. *Rock awash shown.*

DANGERS:

No new obstructions or dangers were found on this sheet except close inshore. Small boats should navigate with caution when approaching the shoreline due to the numerous rocks found along the shore in this area.

CHANNELS:

No channels were developed on this sheet.

ANCHORAGES:

No specific anchorages are found on this sheet. Anchorage can be had wherever the depth affords, having due regard for weather conditions and the inshore dangers.

GEOGRAPHIC NAMES:

No new geographic names were charted. Those appearing on chart 1208 are correct for the area of this sheet.

JUNCTION WITH CONTEMPORARY SURVEYS:

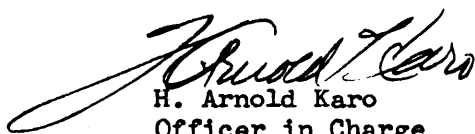
The junction with sheet No. H-6561 on the south and with sheet No. H-6563⁽¹⁹⁴⁰⁾ on the east is satisfactory. It is believed that in general no discrepancies occur which are greater than one foot. Assuming a possible error of one foot will bring all curves into agreement.

MISCELLANEOUS:

This sheet was surveyed by Lieut.(jg) H. F. Garber.

Tidal reducers were obtained from the standard tide gage maintained by the U. S. Engineers at the eastern mouth of the Cape Cod Canal.

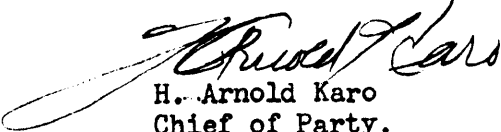
Respectfully submitted



H. Arnold Karo
Officer in Charge
Norfolk Processing Office

Norfolk, Virginia.
July 8, 1941.

The records for Hydrographic Sheet No. H-6562 (Field No.12) have been examined and are approved.


H. Arnold Karo
Chief of Party.

H6562

STATISTICS

SHEET NO. H 6562 LYDONIA

Date	Day	Miles	Soundings	Positions
Sept. 18, 1940	a	11.7	340	57
" 19	b	32.7	878	165
" 20	c	32.5	867	167
" 21	d	37.8	1040	204
" 22	e	36.4	1113	207
" 23	f	<u>37.9</u>	<u>977</u>	<u>202</u>
TOTALS		189.0	5,215	1,002

*spacing as per instructions
gradually inc. from 50 ms for the 2 inch lines
cross lines 5 to 8%*

$\frac{189}{9.45}$

NOTE:

A list of landmarks will be submitted with the descriptive report for hydrographic sheet No. H-6563.

RAC
HLE

TIDE NOTE FOR HYDROGRAPHIC SHEET

July 31, 1941

Coastal Surveys,
Division of ~~Hydrographic Survey~~

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

Plane of reference approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 6562

Locality Indian Hill to Sagamore Beach, Cape Cod Bay.

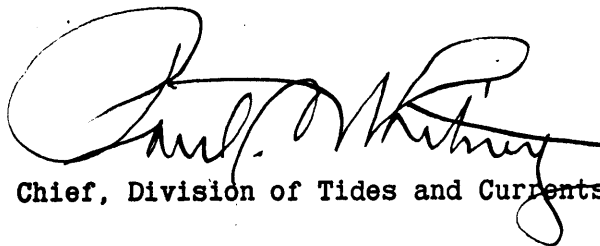
Chief of Party: H. A. Karo in 1940

Plane of reference is mean low water reading

-0.1ft. on tide staff at Cape Cod Canal, East Entrance (gage maintained by
16.7ft. below B. M. "Breakwater" U. S. Engineers).

Height of mean high water above plane of reference is 9.4 feet.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES
 Survey No. **H6562**

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
<u>Center Hill Point</u>												1
<u>Ellisville Harbor</u>												2
<u>Indian Hill</u>												3
<u>Lookout Point</u>												4
<u>Sagamore Beach</u>												5
<u>Cape Cod Bay</u>												6
												7
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												25
												26
												27

Names underlined in red approved
 by L. Heck on 9/25/41

Remarks.

Decisions

1		418 705
2		"
3		"
4		"
5		417 705
6	For title	
7		
8		
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27		
M 234		

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **H6562**

Records accompanying survey:

Boat sheets **.1..**; sounding vols. **.3..**; wire drag vols. **....**;
 bomb vols. **.....**; graphic recorder rolls **.5..**;
 special reports, etc. **part of H-6562 will be found on one roll filed**
with H-6561

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

Number of positions on sheet	1002.
Number of positions checked	.42..
Number of positions revised	.2..
Number of soundings recorded	5215.
Number of soundings revised (refers to depth only)	.31..
Number of soundings erroneously spaced	.25..
Number of signals erroneously plotted or transferred	None
Topographic details	Time ..7..hrs.
Junctions	Time ..1..hrs.
Verification of soundings from graphic record	Time ..16..hrs.

Verification by **A.R. STIRNI**..... Total time **.73. hrs.** Date **Sept. 3, 1941**

Review by **Harold W. Murray**..... Time **43 hrs** Date **Sept. 19, 1941**

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
~~PHOTOSTAT OF~~

No. H **H6562**
~~None~~

{ received July 14, 1941
 registered July 29, 1941
 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			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed
----	------------

✓ *TBR*

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H H6562

Verified and Inked by A. R. STIRNI

Date Sept 3, 1941

1. The descriptive report was consulted and appropriate action taken.
See attached sheet
2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude.
See attached sheet
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. ✓
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 inked & verified pts. ready
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. ✓
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:

Satisfactory

28. Sounding line crossings were satisfactory except as follows:

*previously mentioned
see attached sheet*

29. Junctions with contemporary surveys were satisfactory except as follows:

Satisfactory

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

See attached sheet

31. The protracting was satisfactory except as follows:

*pos. 25e moved 20 m. S.E. { 41 42.5 ✓
70 31.3*

*pos 34 moved . 210 m. N.E. { 41 50.5 ✓
70 30.0*

32. The field plotting of soundings was satisfactory except as follows:

Satisfactory

33. Notes to reviewer:

Rock shown on topo bearing 9' falls exactly on position 27c which is a station used for cutting in another rock. No mention is made of this rock (one on topo.) in the sounding records or in report. Must have gotten on topo thru error.

*The three cuts on hydro sheet accepted
Topo rock removed
HWM*

Vol. 1 sounding records - page 53

*{ 40 50.8
70 31.7*

See attached sheet for other remarks

2

Ref. - page 2 of report.

- (a) Pos. 33a - 34a - sounding rolls read wrong - how agree { 41 42.3 }
135b - 136b - shoaler soundings plotted { 70 31.8 }
- (b) Pos 164d - 169d - shoaler soundings plotted { 41 49.2 } (east-west line)
- (c) 17c - 20c - Given 17e - 20e in report. some soundings taken out, shoaler soundings plotted. { 41 51.5 }
{ 70 31.3 }
- (d) 25c - 26e - 25e moved 20 m S.E. Soundings very thick. shoaler soundings plotted. { 41 48.5 }
{ 70 31.3 }
- (e) 142f - 143f - bottom very irregular - No general trend All soundings plotted { 41 52.2 }
{ 70 30.5 }

30

Rocks between 79b - 80b and 85b - 86b noted in sounding records but not information as to depths, heights etc. given. Taken as awash at existing tide which was 9 ft. Accepted

41	51.4	}	79b - 80b
70	31.6		
41	51.0	}	85b
70	31.8		

33

Sounding record shows weeds or rock (indistinct) betw. 114d - 115d (tide = 8.5') which could bare 2.5 ft. About 60m to north is rock on hydro sheet bearing 2 ft. M.L.W. The distance on the sheet is too great to be the same rock but ~~it may be plotted out of sequence~~ possible recorder may have put his ^{reference note} ~~sounding~~ on wrong space as all the soundings are the same except this one. The rock on the hydro. sheet also appears on the topo. Needs accepted. Depths only 2' if W.M.

Rocks added by checking fathometer rolls and disagreeing with field readings

betw - 41 a - 42 a	41	49.5	70	32.3	-	Awash
18d - 19d	41	50.0	70	31.8	-	Shoal
131d - 132d	41	50.0	70	32.1	-	Awash
151d - 152d	41	49.9	70	32.2	-	Awash
100b - 101b	41	50.1 56.1	70	32.1	-	Awash

Accepted. Inshore area foul with rocks

33

Rock mentioned in report (page 2) between 160 b - 161 b was also plotted as rock awash M.L.W. page 46 Vol. 1 sounding records OK

Numerous shoal soundings and under water rocks were also added by changing readings of fathometer rolls. Can be seen in fathometer records.

Topo station "Vit" (on topo sheet) is given as "Nik" on hydro. Listed as "Nik" also in sounding volumes. changed to "Nik" on Topo. HWM

{ 41 52.6
70 32.0

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF HYDROGRAPHIC SURVEY NO. 6562 (1940) FIELD NO. 12

Massachusetts, Cape Cod Bay, Indian Hill to Sagamore Beach
Surveyed in September 1940, Scale 1:10,000
Instructions dated March 8 and July 26, 1940 (LYDONIA)

Soundings: Hand lead Control: Visual fixes on
Type 808 recording fathometer shore objects

Chief of Party - H. Arnold Karo
Surveyed by - Harry F. Garber
Protracted by - D. M. Stanley
Soundings plotted by - D. M. Stanley
Verified and inked by - A. R. Stirni
Reviewed by - Harold W. Murray, Sept. 15, 1941
Inspected by - H. R. Edmonston

1. Shoreline and Signals

The shoreline and signals originate with 1940 plane table surveys T-6741 and T-6742.

2. Sounding Line Crossings

Satisfactory. (See Descriptive Report, page 2, items 1 to 5).

3. Depth Curves

The usual depth curves including portions of the low water and 6-ft. curve may be satisfactorily drawn. The foul nature of the inshore area prevented adequate development of the two latter curves by the hydrographic party.

4. Junctions with Contemporary Surveys

The junctions on the east with H-6563 (1940) and on the south with H-6561 (1940) will be considered in the reviews of those surveys.

The junction on the north will be considered when that work is received from the field.

5. Comparison with Prior Surveys

a. H-578 (1856), scale 1:40,000

This survey covers the entire area of the present survey and is the basis for present chartings in this area. The development is very sparse. Soundings are in good agreement with the present survey in some instances but in others differences of as much as 10 feet are quite common. It seems unlikely that these large differences are all due to natural changes and it therefore follows that this early survey is an unreliable one. This is well brought out by the 5-3/4 fm. depth, one of three successive soundings obtained on line in Lat. $41^{\circ} 49.6'$, Long. $70^{\circ} 31.6'$ which are all consistently 10 feet deeper than the present survey. Specific mention is made of the following shoal soundings:

- (1) The 24-ft. sounding (charted) in Lat. $41^{\circ} 50.9'$, Long. $70^{\circ} 30.2'$ falls in depths of 40 feet on the present survey. The 24 is one of four soundings of like depth obtained on line and spaced about 250 meters apart which are consistently too deep. If these depths are reliable, it seems certain that the present survey development would have confirmed one of them. These 24s are considered erroneous and should be disregarded.
- (2) The 30-ft. sounding (charted) in Lat. $41^{\circ} 50.5'$, Long. $70^{\circ} 30.1'$ falls in depths of 39 feet on the present survey and is too shoal. This sounding is one of several depths ranging from 28 to 30 feet which are consistently 8 to 10 feet too shoal. These soundings should be disregarded.
- (3) The 17-ft. sounding (charted) in Lat. $41^{\circ} 48.3'$, Long. $70^{\circ} 31.45'$ is the least depth on a shoal defined by only 3 soundings. This shoal falls in depths of 17 to 28 feet on the present survey. The shoal is either displaced in position or has shifted 150 m. eastward where the present survey shows a long shoal with least depths varying from 12 to 16 feet. The charted 17 should be disregarded.
- (4) The 12-ft. sounding (charted) in Lat. $41^{\circ} 50.9'$, Long. $70^{\circ} 31.1'$ falls in depths of 16 feet on the present survey but is only a few meters west of a 14-ft. depth. The position of the 12 on line 4 to 5p is apparently displaced and should fall closer to the 14 because abrupt changes in course exist at Pos. 4 and 5p which are not substantiated by remarks in the

sounding records and moreover, the time interval between the positions is crowded. It is probable that there is at least a 10-degree error in the right angles. Since other depths on this line vary 1 to 2 feet shoaler than the present survey depths, the 14 on the present survey is considered sufficient for charting purposes.

- (5) An 11-ft. sounding (charted) in Lat. $41^{\circ} 50.3'$, Long. $70^{\circ} 31.65'$ falling in depths of 15 feet and between lines spaced 100 m. apart is incorrectly reduced. The correct reduction is 13 feet. In view of the fact that old survey soundings are frequently read in the bottom of the wave trough and therefore often vary 1 to 2 feet too shoal, the present survey depths of 15 feet are considered sufficient for charting purposes.
- (6) The charted 7- and 8-ft. depths in Lat. $41^{\circ} 51.4'$, Long. $70^{\circ} 31.2'$ taken together apparently outline a shoal area shown in more detail on the present survey which has been deepened because the present survey shows 17 feet in the vicinity of the charted 8. The least depth of 9 feet shown on the present survey midway between the 7- and 8-ft. depths is adequate for charting purposes.
- (7) The 28-ft. sounding (charted) in Lat. $41^{\circ} 52.5'$, Long. $70^{\circ} 31.1'$ falls in depths of about 34 ft. on the present survey. The 28 is actually 29 feet. This sounding was obtained just after Position 2p but the line from Position 1 to 2 was rejected because of doubtful angles at Pos. 1. Just previous to Position 2, two 24s were obtained which were of course not plotted. These depths are also not indicated on the present survey. Because of the unreliability of these soundings and their control they are not being carried forward. The present survey shows a shoal spit with a 26-ft. depth about 450 m. southwest.

The soundings just considered specifically above do not portend to include all the differences noted in the comparison but do represent the more outstanding differences. They serve to indicate the general unreliability of this 1856 survey which should be superseded.

b. H-772 (1860), scale 1:10,000

A portion of this survey, which covers the entrance to the Cape Cod Canal, overlaps the present survey on the southeast. General agreement of depths is good but except for the bottom characteristics which may be used to supplement the present survey, the present survey is adequate to supersede this survey.

c. H-3414 (1912), scale 1:20,000

This survey consisting of east-west sounding lines spaced 125 meters apart covers the present survey to the eastward of Long. 70° 31'. General agreement of depths with the present survey is good although in some instances differences of as much as 4 feet are noted.

The charted 28-ft. sounding in Lat. 41° 48.3', Long. 70° 30.3' originates with this survey and falls almost directly on a 34 on the present survey. The 28 was subsequently cleared by wire drag, effective depth of 37 feet on H-3776 (1915-16). It is possible that more lift may have existed in the drag and also that changes in bottom have occurred. The present survey shows several least depths of 31 feet which are considered sufficient for charting purposes.

The closer development on the present survey is adequate to supersede this survey.

d. H-3776 (1915-16) W.D., scale 1:30,000

This wire drag survey extends to within 1/2 to 1 mile of the shoreline. The effective drag depths and soundings do not conflict with the present survey information except as noted below:

- (1) In the following areas the effective drag depths are greater than the development shown on the present survey:

Lat.	Long.	Drag Depths	Present Sur. Dep.	Max. Dif.
41° 50.8'	70° 30.8'	20 ft.	15 to 20 ft.	5 ft.
48.3'	30.3'	37 ft.	31 ft.	6 ft.
48.5'	31.2'	18 ft.	15 to 17 ft.	3 ft.

Several possibilities contribute to the above differences among which may be mentioned changes in bottom. The present survey should be accepted for charting purposes.

- (2) Eighteen soundings fall within the limits of the present survey but only four were carried forward. Doubt exists as to the reliability of the 21, sand bottom in Lat. $41^{\circ} 49.1'$, Long. $70^{\circ} 31.66'$. The 21 falls directly on a 27, smooth bottom on the present survey and appears to be either 1 fathom too shoal or erroneous as to position. The drag had been proceeding southward and grounded on the 16-ft. shoal in Lat. $41^{\circ} 49.5'$, Long. $70^{\circ} 31.8'$. An hour and 15 minutes later dragging was resumed in a northerly direction about 600 m. due east of the grounding. The 21 was obtained about 800 m. south of the recorded drag limits. Since the towing rate was from $3/4$ to $1-1/2$ knots it is possible but seems unlikely that the drag was pulled this additional distance southward and therefore gave an indication of the 21. On the other hand, since the existing previous hydrography consisted of lines spaced 450 m. apart, it is possible that the tender was taking occasional casts to determine the nature of the bottom in more detail. Although this 21 has been carried forward, it is desirable that it be investigated when practical.

The 14 soundings that were not carried forward agree with or within 1 foot of the present survey depths. Such bottom characteristics as were recorded are all "sand."

6. Comparison with Chart 1208 (New Print date 6-4-40)

Charted hydrography originates with surveys discussed in the preceding paragraphs. Mention is made of the 31-ft. sounding in Lat. $41^{\circ} 48.6'$, Long. $70^{\circ} 30.5'$ which falls in depths of 36 feet, smooth bottom on the present survey. This 31 does not specifically originate with any prior survey and has been charted since the first edition of Chart 1208 in 1911, 31 then charted as $5-1/4$ fms. This latter sounding agrees in position with a $6-1/4$ fm. depth on H-578 (1856) and is probably an incorrect charting of the same. The charted 31 should be disregarded.

7. Compliance with Project Instructions

Satisfactory.

8. Condition of Survey

- a. Additional bottom characteristics for charting purposes may be obtained from prior surveys of this area.
- b. A number of rocks awash inshore of the limit of hydrography were added to the smooth sheet from the Boat Sheet. These rocks are generalized as to position and are not specifically mentioned in the sounding records.

9. Additional Field Work Recommended

This is an excellent survey.

When convenient it would be desirable to verify the 21-ft. sounding in Lat. $41^{\circ} 49.1'$, Long. $70^{\circ} 31.66'$ carried forward from H-3776 (1915-16) W.D., and discussed in Par. 5d(2) above. This sounding falls in depths of 27 feet on the present survey and doubt exists as to its reliability.

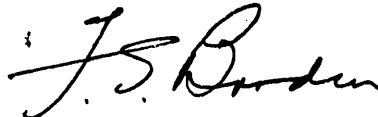
10. Superseded Surveys

H- 578 (1856)	In part
H- 772 (1860)	" "
H-3414 (1912)	" "

Examined and Approved:



Chief, Surveys Section



Chief, Division of Charts



Chief, ^{Section}~~Division~~ of Hydrography



Chief, Division of Coastal Surveys

Applied to Chart 1208

" " " 70

" " " 50

Jan. 21, 1942 G.H.S.

Feb. 3, 1942 G.H.S.

{ From Surg. Chrt. 1208 (2/5/42)

June 10, 1942 G.R.