

6534

6534

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. H-6534
Hydrographic }

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

NOV 1 1940

Acc. No. _____

State MASSACHUSETTS

LOCALITY

NANTUCKET SOUND

Bishop and Clerks to

Monomoy Pt. to

Bishop and Clerks

1939

CHIEF OF PARTY

Chas. M. Thomas

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. 203

REGISTER NO. 6534

116534

State MASSACHUSETTS

General locality NANTUCKET SOUND

Locality ~~BISHOP AND CLERKS TO MONOMOY POINT~~ TO BISHOP AND CLERKS

Scale 1:20,000 Date of survey Aug. 28 - Oct 25, 1939

Vessel MOTOR VESSEL GILBERT

Chief of Party Chas. M. Thomas

Surveyed by Ships Officers

Protracted by M. C. Enstine

Soundings penciled by Alfred Kaupa

Soundings in ~~fathoms~~ feet

Plane of reference Mean Low Water

Subdivision of wire dragged areas by

Inked by H.F. Stegman

Verified by H.F. Stegman

Instructions dated January 17, 1939

Remarks: Soundings penciled at the Norfolk Processing office under the supervision of J.H. Brittain

D E S C R I P T I V E R E P O R T

TO ACCOMPANY

SHEET NUMBER H 6534

(FIELD NUMBER 203)

MASSACHUSETTS COAST

NANTUCKET SOUND

INSTRUCTIONS:

The hydrography on this sheet was executed in accordance with the Director's Instructions to the Commanding Officer, Tender GILBERT dated January 17, 1938 and Supplemental Instructions to the Commanding Officer, Launch MIKAWA dated April 1, 1939.

LIMITS AND SCALE:

This area was surveyed on a scale of 1:20,000.

The limits of this sheet are Longitude $70^{\circ}02.0'$ on the east; Latitude $41^{\circ}38.5'$ on the north to Longitude $70^{\circ}06.6'$; then south to Latitude $41^{\circ}37.2'$; then west to Longitude $70^{\circ}12.3'$; then southwest to Latitude $41^{\circ}36.3'$, Longitude $70^{\circ}14.0'$; then west to Longitude $70^{\circ}14.6'$; then south to Latitude $41^{\circ}35.3'$; then east to Longitude $70^{\circ}14.2'$; then south to Latitude $41^{\circ}34.3'$; then east to Longitude $70^{\circ}02.0'$.

CONTROL:

The control for this sheet consisted of triangulation stations supplemented in part by hydrographic signals and air photographic locations of topographic signals.

The cuts used in determining the position of hydrographic signal GAB are listed in volume one, pages, 5, 7, 8, 9 and 10.

The position of hydrographic signal KIT was furnished by the Launch MIKAWA:

Lat. $41^{\circ} 40'$ + 181 meters

Long. $70^{\circ} 02'$ + 698 meters

TWIN and TIP are hydrographic signals located by the GILBERT. They were located using signals for sheet No. 6533. The positions as determined on that sheet were transferred to sheet No. 6534.

The position of hydrographic signal TANK was furnished by the Launch MIKAWA.

Lat. $41^{\circ} 40'$ + 520 meters

Long. $70^{\circ} 05'$ + 469 meters

SURVEY METHODS:

All soundings on this sheet were taken with the Dorsey No. 1 fathometer. Frequent comparisons were made between the fathometer and lead line, to assure the correct operation of the fathometer.

SURVEY METHODS, CONTINUED:

A copy of the fathometer corrections is attached to this report.

The sounding lines were controlled by sextant fixes on shore objects.

DISCREPANCIES:

No discrepancies were found except in the sounding between 120 to 125 K day appear to be too deep. Another line was run in this vicinity (79 to 84 P day) as a check. It is recommended that the shoaler soundings be charted.

$\phi - 41^{\circ} - 37.8$
 $\lambda 70^{\circ} - 05.0$ to 06.4 Sdgs of K day are in excellent agreement. Discrepancy was probably due to erroneous reducers. See boat sheet

JUNCTIONS:

This sheet joins the Launch MIKAWA'S inshore hydrography on the east, north and northwest.

This sheet joins sheet No. 6533 (1939) on the west, except in the vicinity of Bishop and Clerks Lighthouse. This area will be surveyed later on a larger scale sheet and a junction obtained.

AFD
2-17-41

No junction was made on the south with any modern surveys.

COMPARISON WITH PREVIOUS SURVEYS:

This survey agrees very well with the soundings as charted on Chart 1209. Par. 6, Rev.

TIDE REDUCERS:

The tide reducers on this boat sheet are based on the Boston tides. In reducing these tides to Nantucket Sound, 0.35 of the range was taken with a +05 minute time correction.

Offshore tides were observed with the fathometer in Latitude $41^{\circ} 35'$, Longitude $70^{\circ} 05'$ (approximately).

It is recommended that the tide reducers be taken from the Herring River tide gage. This gage was centrally located while the Stage Harbor gage was in a protected harbor and will not give the time heights of the tides outside.

A large part of the hydrography on this sheet was executed in heavy weather and with a gentle southwest breeze the water piled up in the bight between Monomoy Point and Point Gammon. This will throw a small error in the boat sheet soundings.

Little trouble was experienced with currents on this sheet. However, there is a strong current in the vicinity of Chatham Roads and just west of Monomoy Point.

STATE OF COMPLETION:

The smooth sheet has been prepared and protracted in the field. The tide reducers and fathometer corrections have been entered and checked in the records.

STATE OF COMPLETION, CONTINUED:

This report is compiled entirely from the notes
of Ensign Fair J. Bryant.

Respectfully submitted,

J. E. Waugh Jr.
J. E. Waugh Jr.,
Ensign, C & G Survey.

Approved and forwarded:

H. C. Warwick
H. C. Warwick,
Lieutenant, C&GS.,
Comd'g. Motor Vessel GILBERT.

Date 1939	Day Letter	Statute Mi. Sdg. lines	Number of Soundings	Number of Positions
Aug. 28	A	44.2	920	152
Aug. 29	B	53.7	1107	185
Sept. 7	C	82.8	1700	286
Sept. 12	D	108.6	2196	362
Sept. 13	E	17.9	350	67
Sept. 26	F	12.1	260	48
Oct. 4	G	1.4	31	5
Oct. 5	H	59.3	1223	208
Oct. 10	J	46.6	961	171
Oct. 11	K	64.1	1321	245
Oct. 12	L	55.7	1153	225
Oct. 18	M	66.2	1417	259
Oct. 19	N	10.1	240	45
Oct. 20	P	32.4	708	145
Oct. 23	Q	19.4	410	70
Oct. 25	R	68.4	1436	255
	Totals	742.9	15433	2728

Total area 43.5 square statute miles.

FATHOMETER CORRECTIONS

H6534

SHEET H 6534

Period 1939	Depth Range Feet	Correction Feet
June 15 - 30	0 - 26	- 1
Sept. 7 - 26	27 - 82	- $\frac{1}{2}$
	83 and deeper	0
July 1 - 31	0 - 17	- 1
Sept. 1 - 6	18 - 55	- $\frac{1}{2}$
	56 - 92	0
	93 and deeper	+ $\frac{1}{2}$
Aug. 1 - 31	0 - 14	- 1
	15 - 44	- $\frac{1}{2}$
	45 - 75	0
	76 - 105	+ $\frac{1}{2}$
	106 and deeper	+ 1
Sept. 28 to Oct. 17	0 - 60	- 1
	61 and deeper	- $\frac{1}{2}$
Oct. 18 to Nov. 4	0 - 55	- 1
	56 and deeper	- $1\frac{1}{2}$

L.C.C.
HRC

TIDE NOTE FOR HYDROGRAPHIC SHEET

December 3, 1940

Division of Hydrography and Topography:

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

Tide Reducers are approved in
9 volumes of sounding records for

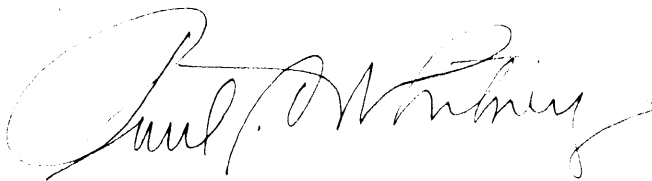
HYDROGRAPHIC SHEET 6534

Locality Bishop and Clerks to Monomoy Point, Nantucket Sound.

Chief of Party: C. M. Thomas in 1939
Plane of reference is mean low water reading
2.8 ft. on tide staff at Herring River (Dennisport)
9.3 ft. below B.M. 1

Height of mean high water above plane of reference is 3.4 feet.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES
 Survey No. **H6534**

Name on Survey												
	A	B	C	D	E	F	G	H	K			
<u>Bishop and Clerks</u>												1
<u>Monomoy Point</u>												2
<u>Nantucket Sound</u>												3
												4
												5
												6
												7
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												27

Names underlined in red approved
 by L. Heck on 3/4/41

Remarks

Decisions

	Remarks	Decisions
1		415702 v.s. 6.B
2		415701 "
3		"
4		
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Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H.6534**

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

Number of positions on sheet	.2728
Number of positions checked	...16
Number of positions revised5
Number of soundings recorded	15433
Number of soundings revised	...63
Number of soundings erroneously spaced	...23
Number of signals erroneously plotted or transferred	None

Date: **Feb. 17, 1941**

Verification by **H.F. Stegman**

Time: **89² hrs**

Review by **J.A.M^c Cormick 2/19/41**

Time: **13 hrs.**

HYDROGRAPHIC SURVEY NO. H6534

Smooth Sheet One

Boat Sheet One

Records; Sounding 9 Vols., Wire Drag 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 Yes

Recoverable Station Cards (Form 524) No

Special Chart for Lighthouse Service Nov. 20, 1939
(Circular Nov.30, 1933)

Hydrography: Total Days 16 ; Last Date Oct. 25, 1939

Remarks _____

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
 PHOTOSTAT OF



No. H 16534
~~No. T~~

received Nov. 6, 1940
 registered Nov. 12, 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			
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63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed
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✓ TBR

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H - 6534 (1939)

Verified and Inked by *Harold F. Stegman*

Date *Feb. 17, 1941*

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 ^a affecting 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.
Except the 18 ft shoal in ϕ 41°-36'7" λ -70°-05'8". ✓ ✓
14. The reduction and plotting of doubtful soundings were checked. ✓ ✓

15. The transfer of contemporary topographic information was carefully examined. *None - Offshore survey.* ✓
16. All junctions were transferred. *Satisfactory junctions were made with H-6470 (1939) and H-6533 (1939). H-6471, 6472 & ~~6473~~ (all of 1939) were not yet verified.*
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. *Except where the curve was broken at the sdg. to smooth out unnatural breaks.* ✓ ✓
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. *None.* ✓
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. *None* ✓
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). *Shoreline not shown. See contemporary inshore surveys H-6470, 6471, 6472, 6473 (all of 1939) for shoreline as transferred from topographic surveys.* ✓
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:~~

See note under paragraph 16. ✓

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

31. The protracting was satisfactory except as follows:

Pos. 1-F, a comparison, is a 13ft sdg. and plots in depths of 34 to 36 ft. The position given is probably not that of the comparison, but rather a position taken to locate the ship for beginning the line 2F-9F. The position plots at $\phi - 41-35.0$ $\lambda - 70^{\circ}-10.8$. The position is not on the boatsheet at this location. Disregard. ✓

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

Plotter did not always plot the shoalest sdg. at crossings, but used the first sounding recorded. ✓

33. Notes to reviewer:

See vol. 4 page 24 for pos 1-F mentioned under paragraph 31 above. ✓

*Respectfully submitted,
Harold F. Stegman*

Feb 17, 1941

DIVISION OF CHARTS

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6534 (1939) FIELD NO. 203

Massachusetts; Nantucket Sound;
Monomoy Point to Bishop and Clerks
Surveyed in August - October 1939, Scale 1:20,000
Instructions dated January 17, 1938 (GILBERT)

Soundings:

Control:

Dorsey I Fathometer

Three-point Fixes on Shore Signals

Chief of Party - C. M. Thomas
Surveyed by - C. M. Thomas
Protracted by - M. C. Enstine
Soundings plotted by - A. Kaupa
Verified and inked by - H. F. Stegman
Reviewed by - J. A. McCormick, February 19, 1941
Inspected by - H. R. Edmonston

1. Shoreline and Signals

Shoreline has been omitted. Signal authorities are given in the descriptive report, page 1, Control.

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves

Satisfactory.

4. Junctions with Contemporary Surveys

- a. Satisfactory junctions were effected with H-6470 and H-6533 of 1939 on the west and with H-6473 (1939) on the east. It is noted, however, that the hand lead soundings of H-6470 and H-6473 average about one foot deeper than the overlapping fathometer soundings of the present survey.
- b. Junctions with H-6471 and H-6472 of 1939 on the north will be considered in the reviews of those surveys. New surveys have not yet been made on the south but there is satisfactory agreement of

depths at the southern limits of the present survey with depths charted from older surveys.

5. Comparison with Prior Surveys

- a. H-184 (1847), 1:20,000; H-245 (1849), 1:20,000;
H-387 (1853), 1:30,000; H-455a (1854), 1:40,000;
H-527 (1855-56), 1:30,000

Depths on the above surveys are widely spaced but are mostly in fair agreement with those on the present survey. The exception is H-455a, which differs considerably in some places. The old surveys are superseded in the common area.

- b. H-1243 (1874), 1:20,000; H-1948 (1889), 1:20,000;
H-1949 (1889), 1:10,000

Agreement of these surveys with the present work is fair to good. Differences seldom exceed one foot and rarely two feet. The 29-foot depth (not charted) in Lat. $41^{\circ} 36.0'$, Long. $70^{\circ} 06.4'$ on H-1948 falls between soundings of 34 and 35 feet on that survey and in 33 to 34 feet on the present survey and on H-1243. The 29 is evidently in error by one fathom and should be disregarded. Depth curves on old and new surveys are strikingly similar and it is remarkable that differences are so few over a bottom which is predominantly sand. The present survey adequately covers the area without retention of any material from the older surveys.

6. Comparison with Chart 247 (New Print of July 11, 1940)
Chart 250 (New Print of May 3, 1940)
Chart 1209 (New Print of July 2, 1940)

a. Hydrography

Depths charted in this area are mostly from surveys discussed in paragraph 5b. Depths listed below are not from any of this Bureau's surveys nor could their source be determined. They appear to have been carried forward to chart 1209 from obsolete chart 111.

- (1) 24 feet in Lat. $41^{\circ} 37.8'$, Long. $70^{\circ} 03.8'$.
 28 feet on present survey.
- (2) 22 feet in Lat. $41^{\circ} 36.2'$, Long. $70^{\circ} 08.0'$.
 26 feet on present survey.

- (3) 21 feet in Lat. 41° 35.8', Long. 70° 08.2'.
27 feet on present survey.
- (4) 25 feet in Lat. 41° 35.8', Long. 70° 09.2'.
28 feet on present survey.
- (5) 34 feet in Lat. 41° 34.7', Long. 70° 11.8'.
38 feet on present survey.
- (6) 31 feet in Lat. 41° 34.7', Long. 70° 12.6'.
40 feet on present survey.

Only one of the above depths which is in any way verified on the old survey is (2). H-1948 (1889) shows 23 feet near this point as compared with 26 feet on the present survey. It is the reviewer's opinion that all six of these depths should be disregarded.

b. Navigational Aids

- (1) The survey position of Bell "1" (Lat. 41° 34', Long. 70° 14') is 400 meters east of the charted position. The survey shows the watch buoy as a can instead of the spar charted.
- (2) The striped nun buoy (Lat. 41° 37', Long. 70° 06') is 200 meters southwest of the charted position.
- (3) Bell "1" (Lat. 41° 38', Long. 70° 02.8') is 475 meters south-southeast of the charted position.

7. Condition of Survey

Satisfactory.

8. Compliance with Instructions for the Project

Satisfactory.

9. Additional Field Work Recommended

None.

10. Superseded Surveys

H-184	in part	H- 527	in part
H-245	" "	H-1243	" "
H-387	" "	H-1948	" "
H-455a	" "	H-1949	" "

Examined and approved:

Thos B Reed

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

J. S. Borden

Chief, Division of Charts

C. H. Green

Chief, Section of Hydrography

G. W. Hude

Chief, Division of
Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. ^H 6534

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1-10-47	257	M. Andrews	Before After Verification and Review <i>Completely Applied</i>
			Before After Verification and Review
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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.

Applied to Chart	*250-	7/27/41	P.B.L.
"	"	"	OK
"	"	Aug 1941	J.M.A.
"	"	1107	J.M.A.
"	"	1108	J.M.A.
"	"	70	J.M.A.
"	"	247	S.R.
"	"	Mar. 1942	S.R.
"	"	258	S.R.