

8503

Diag. Cht. No. 1107.

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey HYDROGRAPHIC
Field No. HY-2259 & HY-2359
Office No. H-8503

LOCALITY

State MASSACHUSETTS
General Locality MARTHA'S VINEYARD
Locality SOUTH OF GAY HEAD

1959

CHIEF OF PARTY
M. E. Wennermark

LIBRARY & ARCHIVES

DATE 1/12/60

8503

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.

REGISTER No. H-8503

Field No. HY-2259

AREA "B"

State MASSACHUSETTS

General locality MARTHA'S VINEYARD ISLAND

Locality SOUTH OF ~~WALDEN ISLAND~~ GAY HEAD

Scale 1:20,000 Date of survey 16-21 Sept. 1959

Instructions dated 19 August 1959

Vessel USCGC HYDROGRAPHER

Chief of party M. E. WENNERMARK

Surveyed by D.M. Whipp, P.A. Stark, J.T. Flynn, L.S. Brown, D.W. Moncevicz,
P.A. Martus, R.R. Floyd.

Soundings taken by ~~hydrographic recorder~~ ~~hand lead, etc.~~ Graphic Recorder

Fathograms scaled by Ship's Personnel

Fathograms checked by Ship's Personnel

Protracted by R. R. Floyd

Soundings penciled by P. A. Martus

Soundings in fathoms ~~feet~~ at MLW ~~MLW~~ and all true depths

REMARKS: Off Shore Survey

RWW 10/17/92

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.

REGISTER NO. H-850³

Field No. HY-2259

AREA "C"

State MASSACHUSETTS

General locality MARTHA'S VINEYARD ~~ISLAND~~

Locality ~~36 MI.~~ S. of Gay Head

Scale 1:20,000 Date of survey 3-8 Sept. 1959

Instructions dated 19 August 1959

Vessel USC&GSS HYDROGRAPHER

Chief of party M. E. Wennermark

Surveyed by D.M. Whipp, P.A. Stark, J.T. Flynn, L.S. Brown, D.W. Moncevicz,
P.A. Martus, R.R. Floyd.

Soundings taken by ~~fathometer~~, graphic recorder, ~~hand depth gauge~~ Graphic Recorder

Fathograms scaled by Ship's Personnel

Fathograms checked by Ship's Personnel

Protracted by P. A. Martus

Soundings penciled by J. T. Flynn

Soundings in fathoms ~~feet~~ at MLW ~~XXXXXX~~ and are true depths

REMARKS: Off Shore Survey

DESCRIPTIVE REPORT
TO ACCOMPANY HYDROGRAPHIC SURVEYS

~~HY-2159 (H-8502) Area A~~
HY-2259 (H-8503) Area B (1959)
HY-2359 (H-8504) Area C (1959)

*A.E.C. Waste
Disposal Areas*

VICINITY MARTHA'S VINEYARD ISLAND and PROVINCETOWN, MASSACHUSETTS
1959

Ship HYDROGRAPHER
M. E. WENNERMARK

SCALES: 1:20,000
Chief of Party

A. PROJECT:

Project No. 08000-810, Original instructions _____
dated 19 August 1959, Supplemental Instructions dated 11
September 1959.

B. SURVEY LIMITS AND DATES:

See _____
AREA A / HY-2159 (H-8502)

Area "A" (HY-2159) covers a square area 5 miles on a
side and centered at Latitude $42^{\circ} 13.4' N$; Longitude $69^{\circ} 48' W$.
The area is approximately 16 miles northeast of Cape Cod Light.
The approximate limits of the sheet are: Latitude $42^{\circ} 11' N$
to $42^{\circ} 16' N$., and Longitude $69^{\circ} 44' W$. to $69^{\circ} 52' W$.

Field work began 29 September 1959 and ended 9 October 1959.

This Survey makes a junction and is included within the
following prior survey:

H - 6564 1:120,000 1940

AREA B HY-2259 H-8503 (1959)

Area "B" (HY-2259) ^{H-8503 (1959)} covers a rectangular area 1.75 by 2.25
miles centered at Latitude $41^{\circ} 13.4' N$., Longitude $70^{\circ} 49' W$.
This area is the southern half of the prohibited area around
~~No-Mans-Land.~~
Nomans Land.

The approximate limits of the sheet are:
Latitude $41^{\circ} 12.5' N$ to $41^{\circ} 14.5' N$., and
Longitude $70^{\circ} 47.5' W$ to $70^{\circ} 50.5' W$.

Field work on this sheet begins 14 September 1959 and
ended 22 September 1959.

This survey ~~makes a junction and is included~~ ^{falls} within the
following prior survey:

H-6445 1:40,000 1939

~~H-6446~~

~~1:40,000~~

~~1939~~

~~junction only~~

AREA C HY-2359 H-8504³(1959)

Area "C" (HY-2359)^{H-8503(1959)} covers a square area 5 miles on a side ✓
centered at Latitude 40° 45' N., Longitude 70° 52.7' W. This
area is the central portion of the dumping area 36 miles south of
Gay Head, Martha's Vineyard. The approximate limits of the sheet
are: Latitude 40° 42.5' N to 40° 47.5' N., and Longitude 70° 49.0'
W to 70° 56.5' W.

Field work on this sheet began on 1 September 1959 and ended ✓
9 September 1959.

This survey ~~makes a junction and is included~~^{falls} within the ✓
following prior survey:

H - 6447 1:80,000 1939

C. VESSEL AND EQUIPMENT

The hydrography on these surveys was done by the Ship ✓
HYDROGRAPHER. The turning radius at sounding speed (120 r.p.m.
or approximately 10 knots) of the HYDROGRAPHER is 80 to 120 meters
depending upon the prevailing wind and current.

808 J type fathometers were used for this entire survey. ✓
The following serial numbers were used: 153 SPX and 57-31.

D. TIDE AND CURRENT STATIONS

AREA A

Area "A" (HY-2159) tide reducers for this survey are
referenced to the Standard Tide Gage at Boston, Massachusetts
with a correction of plus 10 minutes in time and 0.8 ratio of
high-water heights. N/A

A 100 hour Roberts Radio current station was observed at
approximately Latitude 42° 13' N and Longitude 69° 48' W.

AREA B

^{H-8503(1959)}
Area "B" (HY-2259) tide reducers for this survey are referenced ✓
to the Standard Tide Gage at Newport, Rhode Island, with no time
correction and a 0.9 ratio of high-water heights.

A 100 hour Roberts Radio current station was observed in the
approximate center of the area at Latitude 41° 13.4' N and
Longitude 70° 49' W.

AREA C

^{H-8503(1959)}
Area "C" (HY-2359) tide reducers are referenced to the ✓
Standard Tide Gage at Newport, Rhode Island with a time correction
of minus 45 minutes and a 0.4 ratio of high-water heights.

A 100 hour Roberts Radio current station was observed in the approximate center of the area at Latitude $40^{\circ} 45' N$ and Longitude $70^{\circ} 52.7' W$.

For all areas, Boat Sheet tide correctors were derived from Tide Tables. The Smooth Sheet Tide correctors were furnished by the Washington Office for all three areas.

E. SMOOTH SHEET

The smooth sheet projection and Raydist areas were ruled by the Washington Office.

These are off-shore surveys and contain no shore line or topographic details.

F. CONTROL STATIONS

All hydrography on these sheets was controlled by Raydist with an R_1 and R_2 lane width equal to 149.87307 feet. A discussion of the R_1 and R_2 stations for each area follows.

AREA A (HY-2159)

R_1 station at Wellfleet, Cape Cod, Massachusetts is located at Latitude $41^{\circ} 56' 31.43'' N$ and Longitude $69^{\circ} 59' 11.30'' W$.

R_2 station at Provincetown, Massachusetts is located at Latitude $42^{\circ} 04' 23.88'' N$, and Longitude $70^{\circ} 12' 28.22'' W$.

The G.P. of this station was determined in 1959 by K.S. Ulm, Boston District Officer. It is the same as R.M. 4 of triangulation station Ocean View. N/A

The hydrography of this area was based on survey buoys "G" and "H". The control was established by obtaining independent sextant fixes, setting the Raydist dials and then locating buoys "G" and "H" (see 1959 Raydist-Shoran Report Ship HYDROGRAPHER).

AREA B (HY-2259) H-8503 (1959)

R_1 at Wellfleet, Cape Cod Massachusetts is located at Latitude $41^{\circ} 56' 31.43'' N$ and Longitude $69^{\circ} 59' 11.30'' W$. - used as reference station.

R_2 at Gay Head, Martha's Vineyard Island, Massachusetts is located at Latitude $41^{\circ} 20' 48.79'' N$ and Longitude $70^{\circ} 49' 59.49'' W$.

No information could be found on this station in triangulation branch.

The hydrography of this area was run by setting the Raydist dials on survey buoy "E". The control was established by obtaining sextant fixes, setting the Raydist dials and then running a location on Buoy "E". Three independent sextant fixes were made and the probable error of location was about (0.1) lanes (see 1959 Shoran-Raydist Report, Ship HYDROGRAPHER).

AREA C (HY-2359) H-8503 (1959)

R_1 at Wellfleet, Cape Cod, Massachusetts is located at Latitude $41^{\circ} 56' 31.43''$ N and Longitude $69^{\circ} 59' 11.30''$ W. - used as reference station ✓
 R_2 at Gay Head, Martha's Vineyard Island, Massachusetts is located at Latitude $41^{\circ} 20' 48.79''$ N and Longitude $70^{\circ} 49' 59.49''$ W. - No information could be found on this station in triangulation Branch.

The hydrography of this area was run by setting the Raydist dials on Survey Buoy "D". This buoy was located 2 September 1959 on a run from Texas Tower No. 3. (The Raydist values for Texas Tower #3-East Leg-are $R_1 = 2429.0$ lanes and $R_2 = 2590.9$ lanes). The position of Buoy "D" was later checked from a calibration on survey Buoy "E" (see 1959 Raydist-Shoran Report, Ship HYDROGRAPHER).

The G.P. of R_1 station at Wellfleet, Massachusetts was determined in 1957 by K.S. Ulm, Boston District Officer. It is the same as R. M. I of triangulation station FRAZIER, 19578 - used as reference station ✓

The G.P. of the R_2 station at Gay Head, Martha's Vineyard Island was determined in 1958 by K. S. Ulm, Boston District Officer. It is known as Raydist, R.M. I of 1958 and was located from Gay Head No.2, 1958. - No information could be found on this station in triangulation Branch.

G. SHORELINE AND TOPOGRAPHY

No shoreline or topography is shown on these sheets as they are off shore surveys. ✓

H. SOUNDINGS

All depths were measured using 808 J type fathometers. Adequate checks and tests were made to verify the accuracy of the soundings. See separate report on Fathometer and Velocity Corrections - 1959 Field Season, Ship HYDROGRAPHER. ✓

I. CONTROL OF HYDROGRAPHY

Raydist control was used for all ship work on these sheets. The Raydist dials were set on survey buoys, as described in section F. A complete explanation of Raydist control and Raydist corrections pertaining to each respective area is included in the 1959 Raydist ~~report~~ - Shoran Report, Ship HYDROGRAPHER. For a further explanation of Raydist see Technical Bulletin No. 5, Raydist Report submitted to the Washington Office, 15 August 1958 and the Addendum to the Raydist Report submitted 28 October 1958. ✓

The proper corrections have been applied to the Raydist distances recorded in the sounding volumes and the smooth sheets are plotted correctly on the North American 1927 Datum.

J. ADEQUACY OF SURVEYS

All three surveys of Area B and Area C are complete and adequate to supersede prior surveys for charting.

in the common areas

On survey HY-2159 (Area A) a 110,120, and 130 fathom depth curve was added to the smooth sheet in addition to the standard depth curves to aid in comparing the junction with H-6564 and in the comparison with C&GS Chart No.1107. On HY-2159 the junctions are satisfactory and depth curves can be adequately drawn at the junctions. N/A

H-8503 (1959)
On survey HY-2259 (Area B) only the standard 10 fathom depth curve is drawn. ~~The junctions are satisfactory and depth curves can be adequately drawn at the junction.~~

H-8503 (1959)
On survey HY-2359 (Area C) the only applicable depth curve is the standard 30 fathom curve. ~~This has been omitted from the smooth sheet.~~ *30 Fathom curve drawn on smooth sheet.*

K. CROSSLINES

On all the sheets crosslines were run to approximately 5-10% of the regular system of sounding lines. ✓

On survey sheet HY-2159 (Area A) crossline soundings discrepancies do not exceed 2% of the depth except on crossline 25-27 L day. Within this area the greatest percentage of depth error is 8%. The reason for the discrepancies in this area is attributed to the irregular contour of the bottom as revealed by an examination of pertinent fathograms. A 110 fathom depth curve in this area was drawn to aid in delineating the rough bottom.

H-8503 (1959) *H-8503 (1959)*
On survey sheets HY-2259 (Area B) and HY-2359 (Area C) the crossline soundings and regular system of lines soundings are in excellent agreement. ✓

L. COMPARISON WITH PRIOR SURVEYS

AREA A HY-2159 (H-8502)

The survey on this sheet was compared with the following prior survey: N/A

H-6564 1:120,000 1940

In general, the comparison of the soundings and sounding lines was good. Since this is a modern electronically controlled survey, using close line spacing and continuously recording fathometers, it is recommended that data from this sheet govern.

AREA B HY-2259 H-8503 (1959)

The survey on this sheet was compared with the following prior survey: ✓

H-6445 1:40,000 1939

Agreement is excellent. It is recommended that the new depths and contours obtained by this modern, electronically controlled

survey be used. See Review Report - Part 6

AREA C HY-2359 H-85043 (1959)

The survey on this sheet was compared with the following prior survey: ✓

H-6447 1:80,000 1939

Considering the difference in scales and the number of sounding lines the new survey agreed favorable with the 1939 prior survey. It is recommended that the new depths obtained by this modern, electronically controlled survey be used.

M. COMPARISON WITH CHART

AREA A HY-2159 (H-8502)

This survey was compared with C&Gs Chart No. 1107, Scale 1:400,000, the largest scale survey of the area available. The comparison was good considering the difference in scale between the chart and smooth sheet. Some comparisons are listed below:

<u>Chart 1107</u>	<u>Approx. Position</u>	<u>Smooth Sheet HY-2159</u>
* 131 fms.	42° 15.3' N 69° 50.0' W	123 fms.
116 fms.	42° 12.2' N 69° 50.8' W	115 fms.
85 fms.	42° 11.0' N 69° 47.9' W	85 fms.
124 fms.	42° 13.4' N 69° 47.5' W	122 fms.
134 fms.	42° 14.9' N 69° 45.5' W	131 fms.

N/A

* No indication of a 130 fathom depth curve in this area was determined by HY-2159.

The closer line spacing and more accurate Raydist control gives a much more comprehensive and accurate delineation of bottom characteristics than previous surveys.

It is recommended that the depths found on the new survey be accepted.

AREA B HY-2259 (H-8503) (1959)

This survey was compared with C&Gs Chart No. 1210, scale 1:80,000 the largest scale of the area available. The comparison was excellent considering the difference in scale between the chart and smooth sheet. Some comparisons are listed below.

Slight difference can be attributed to recorded sounding units. Sounding recorded in feet on prior survey differs from the present survey.

<u>Chart 1210</u>	<u>Approx. Position</u>	<u>Smooth Sheet HY-2259 H-8503 (1959)</u>
76 ft. - from H-6445 (1939)	41° 12.8' N ✓ 70° 50.3' W	78 ft.
56 ft. - from H-6445 (1939)	41° 13.7' N ✓ 70° 50.3' W	62 ft. Fall between 50 ft. sndg & 62 ft. sndg
<u>Chart 1210</u>	<u>Approx. Position</u>	<u>Smooth Sheet HY-2259</u>
59 ft. - from H-6445 (1939)	41° 13.8' N ✓ 70° 49.5' W	65 ft. - see Review Report Part 6
62 ft. - from H-6445 (1939)	41° 13.3' N ✓ 70° 48.9' W	64 ft. - see Review Report Part 6
68 ft. - from H-6445 (1939)	41° 12.9' N ✓ 70° 48.3' W	66 ft. ✓
67 ft. - from H-6445 (1939)	41° 14.3' N ✓ 70° 48.4' W	64 ft.

AREA C HY-2359 H-8503 (1959)

This survey was compared with C&GS Chart No. 1107, scale ⁺¹¹⁰⁸ 1:400,000 the largest scale survey of the area available. The comparison was excellent considering the difference in scale between the chart and smooth sheet. Some comparisons are listed below. ✓

<u>Chart 1107</u>	<u>Approx. Position</u>	<u>Smooth Sheet HY-2359 H-8503 (1939)</u>
32 fms - from H-6447 (1939)	40° 45.6' N ✓ 70° 51.5' W	33 fms ✓
33 fms	40° 44.5' N ✓ 70° 54.8' W	34 fms ✓

W. DANGERS AND SHOALS:

AREA A HY-2159

There are no dangers to surface navigation within the limits of this survey. The shallowest depth recorded was 83 fathoms in Latitude 42° 10.9' N., Longitude 69° 47.9' W. Other shoal soundings are as follows:

<u>Least Depth (fms)</u>	<u>Position</u>	<u>Approximate Latitude</u>	<u>Longitude</u>
92	(1 out of 56K)	42° 13.3' N	69° 51.2' W
102	(5 out of 79K)	42° 14.9' N	69° 50.5' W

Soundings obtained on this survey were the same or shaller than soundings from H-6564 or from C&GS Chart No. 1107.

H/A

AREA B HY-2259 (H-8503 (1959))

The following shoal soundings are in addition to those mentioned in sections M.

<u>Least Depth (fms)</u>	<u>Position</u>	<u>Approximate</u>	
		<u>Latitude</u>	<u>Longitude</u>
7 ² / ₂ fms. (47 ft.) ✓	33A	41° 14.4 ³⁸ ' N	70° 50.3 ¹ ' W ✓
6 ⁸ / ₈ fms. (41 ft.) ✓	93A	41° 14.4 ³⁵ ' N	70° 48.9 ⁸¹ ' W ✓
9 ⁶⁷ / ₆₇ fms. (58 ft.) ✓	2 1/4 min from 39B	41° 13.4 ⁴³ ' N ✓	70° 50.4 ⁴³ ' W ✓

All previously charted dangers and shoals were found as charted or greater depths were obtained except as listed in Sections M and N.

AREA C HY-2359 (H-8503 (1959))

The shoalest soundings obtained on this survey are 30 fathoms and occur in the northwest part of the sheet. These 30 fathom depths are not indicated on prior survey H-6447 nor on C&GS Chart 1107. As mentioned in Section J the 30 fathom depth curve has not been drawn on the sheet.

Other than the 30 fathom depths there are no important newly found dangers and shoals.

O. COAST PILOT INFORMATION:

None

P. AIDS TO NAVIGATION:

No fixed or floating aids to navigation are located within the limits of these surveys.

Q. LANDMARKS FOR CHARTS:

No landmarks for charts are located within the limits of these surveys.

R. GEOGRAPHIC NAMES:

J. G. H. No investigation of geographic names was made.

S. SILTED AREAS:

Not applicable

T. BY-PRODUCT INFORMATION:

Not applicable

U. - Y. MISCELLANEOUS

The Ship's Head corrections (see page 15, Technical Bulletin No., 5, April 1959) to the Raydist were computed for the center of each sheet and these correctors were used throughout the entire sheet. The curvature of the distance arcs was not significant on these sheets. As an example, in Area B (HY-2259) ^{11-28-59 (1959)} where the arc curvatures are greatest, the error in the most extreme case is about .03 lane in the R₂ dial setting. This is a negligible correction and thus was not applied.

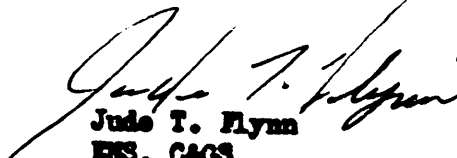
Area A (HY-2159), "E" Day, 3 October 1959, positions 22 to 48 were rejected because the fathometer scale setting was not in position properly. The lines were re run on "K" Day and are correctly plotted on the smooth sheet. K/A

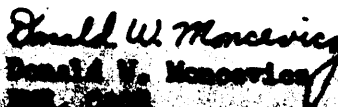
2. TABULATION OF APPLICABLE DATA:

Seasons Report - 1959 Season	To Washington Office December 1959.
Raydist & Shoran Report - 1959 Season	To be Forwarded.
Fathometer & Velocity Correction Report - 1959 Season.	To be Forwarded.

Oceanographic Activities Reports

Bathythermograph Slides	22 October 1959
Oceanographic Log Sheets - "A"	22 October 1959
Oceanographic Log Sheets - "B"	22 October 1959
Bottle Water Samples	22 October 1959
Bottom Cores	22 October 1959
Bottom Samples	22 October 1959
Current Observation Record Books	21 October 1959
Current Meter Tapes	21 October 1959
Record of Drift Bottle Drops	22 October 1959
Field Record of BT Data	22 October 1959


Jude T. Flynn
ENS, CAGS


Donald W. Monowicz
ENS, CAGS

APPROVAL SHEET

The field work accomplished on this project was under my personal supervision. Daily inspection of the records, boat sheet and smooth sheet were made as the work progressed. ✓

The records, boat sheet and smooth sheet as submitted to the Washington Office have been reviewed and are approved by me. -see Review Report Part 4

The survey is complete and adequate and no additional field work is recommended. ✓

M. E. Wennermark

M. E. Wennermark
CAPT, C&GS
Comdg., Ship HYDROGRAPHER

STATISTICS FOR HYDROGRAPHIC SURVEY
 HY-2259 (H-8503) AREA B
 USC&GSS HYDROGRAPHER
 1959

PROJECT 08000-810

<u>Day Letter</u>	<u>Volume Number</u>	<u>Date</u>	<u>No. of Positions</u>	<u>Naut. Mi. Soundings</u>
A	1	16 Sept. 1959	113	36.2
B	1	17 Sept. 19 59 ⁵	76	19.2
C	1	18 Sept. 1959	40	----*
D	1	19 Sept. 1959	82	9.2
E	1	20 Sept. 1959	47	----*
F	1	21 Sept. 1959	8	----*
TOTAL			366	64.6

* Oceanographic positions only. No hydrography these days.

STATISTICS FOR HYDROGRAPHIC SURVEY
 HY-2359 (H-8504)³ AREA *AC*
 USC&GSS HYDROGRAPHER
 1959

PROJECT 08000-810

<u>Day Letter</u>	<u>Volume Number</u>	<u>Date</u>	<u>No. of Positions</u>	<u>Naut. Mi. Soundings</u>
A	1	3 Sept. 1959	36	15.5
B	1	4 Sept. 1959	99	43.7
C	1 & 2	5 Sept. 1959	213	87.7
D	2 & 3	6 Sept. 1959	206	83.2
E	4	7 Sept. 1959	182	68.1
F	4	8 Sept. 1959	<u>6</u>	<u>2.5</u>
		TOTAL	742	300.7
		HY-2159 (H-8502)	837	307.3
		HY-2259 (H-8503) ¹⁹³⁹	366	64.6
		HY-2359 (H-8504) ³ ¹⁹³⁹	742	300.7
		GRAND TOTAL	1945	672.6

EMC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~DIVISION OF COASTAL SURVEYS~~

23 February 1960

Division of Charts: R. H. Carstens

Plane of reference approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 8503

Locality South of Martha's Vineyard, Mass.

Chief of Party: M. E. Wennermark
Plane of reference is mean low water
ft. on tide staff at
ft. below B. M.

Height of mean high water above plane of reference is:

Area "B" 3.2 feet

Area "C" 1.4 feet

Condition of records satisfactory except as noted below:

Chief, Tides Branch
~~CHIEF, DIVISION OF TIDES AND CURRENTS~~

GEOGRAPHIC NAMES
Survey No. **H-8503**

Name on Survey												
	A	B	C	D	E	F	G	H	K			
MARTHA'S VINEYARD (TITLE)											BGN	1
GAY HEAD (TITLE)												2
												3
												4
												5
												6
												7
												8
												9
												10
TIDE STATIONS												11
BOSTON											BGN	12
NEWPORT												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27

George M. Buer
Geographic Names
January 1960

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8503....

Records accompanying survey: Smooth sheets ..1...;
 boat sheets .1...; sounding vols. 5.....; wire drag vols.;
 Descriptive Reports ..1...; graphic recorder envelopes .3...;
 special reports, etc. .1.Cahier-Plotting.Abstracts.and.1.Cahier
 Brush and Recorder Tapes.....

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

Number of positions on sheet	1153
Number of positions checked	28
Number of positions revised	0
Number of soundings revised / (refers to depth only)	32 Revised by 2 fathoms which brought crosslines in agreement.
Number of soundings erroneously spaced	0
Number of signals erroneously plotted or transferred	0
Topographic details	Time 0
Junctions	Time 3 hrs
Verification of soundings from graphic record	Time 6
Special adjustments	Time 0

Verification by *George A. Kozemczak* Total time 148 hrs. Date 10 May-61

Reviewed by *Dennis J. Romeburg* Time 46 hrs Date 12-21-70

Inspected *D. Baumgardner* 15 hrs 8-10-76
Engle 4 11-19-76

H-8503

Items for Future Presurvey Reviews

No significant changes have occurred since the prior surveys. The bottom is considered adequately developed.

<u>Position Index</u>		<u>Bottom Change Index</u>	<u>Use Index</u>	<u>Resurvey Cycle</u>
<u>Lat.</u>	<u>Long.</u>			
404	0710	3	2	50 years
411	0705	5	2	25 years

OFFICE OF MARINE SURVEYS AND MAPS

MARINE SURVEYS DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8503

FIELD NO. HY-2259; HY-2359

Massachusetts, Martha's Vineyard, South of Gay Head

SURVEYED: September 16-21, 1959; September 3-8, 1959

SCALE: 1:20,000; 1:20,000

PROJECT NO.: 08000-810

SOUNDINGS: 808 Depth Recorder

CONTROL: Raydist

Chief of Party	M. E. Wennermark
Surveyed by	D. M. Whipp
.....	P. A. Stark
.....	J. T. Flynn
.....	L. S. Brown
.....	D. W. Moncevicz
.....	P. A. Martus
.....	R. R. Floyd
Protracted by	P. A. Martus; R. R. Floyd
Soundings Plotted by	J. T. Flynn; P. A. Martus
Verified and Inked by	G. A. Kozemczak
Reviewed by	D. J. Romesburg
	Date: December 21, 1970
Inspected by	S. Baumgardner

1. Description of the Area

Area B

This survey covers a 4-square-mile area south of Gay Head from latitude 41°12.4' to latitude 41°14.5' and from longitude 70°47.5' to longitude 70°50.6'. The bottom slopes from northwest to southeast and depths range from 6⁸ fathoms to 15 fathoms. Predominant bottom characteristics are sand, broken shells, pebbles, and gravel.

Area C

This survey covers a 25-square-mile section of a dumping area south of Gay Head from latitude 40°42.5' to latitude 40°47.5' and from longitude 70°49.0' to longitude 70°56.5'. The bottom is gently sloping from depths of 30-31 fathoms on the northern survey limits to depths of 35-36 fathoms on the southern limits. The bottom consists of sand and mud.

2. Control and Shoreline

The origin of control is adequately covered in parts F and I of the Descriptive Report.

There is no shoreline within the survey areas.

3. Hydrography

- A. Depths at crossings are in good agreement.
- B. The usual depth curves are adequately delineated.
- C. The development of bottom configuration is considered adequate.

4. Condition of Survey

The field plotting, sounding records, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual except that the sounding volumes were not signed by the Chief of Party.

5. Junctions

No contemporary surveys junction with the present survey. However, present depths are in general harmony with charted depths.

6. Comparison with Prior Surveys

H-6445	(1939)	1:40,000
H-6447	(1939)	1:80,000

A comparison between prior and present depths reveals only minor differences over the past 20 years. The only notable exception is a small feature found on the present survey in latitude $41^{\circ}13.39'$, longitude $70^{\circ}50.42'$ with a least depth of 9' fathoms. This feature falls between sounding lines in depths of 11 fathoms on prior survey H-6445 (1939). Minor differences can be attributed to the different sounding units recorded (feet on the prior surveys versus fathoms on the present survey) and to the larger scale and closer development of the present survey.

Attention is directed to the following:

- A. The 9⁸-fathom sounding in latitude $41^{\circ}13.84'$, longitude $70^{\circ}49.48'$ from H-6445 (1939) was not disproved by the present survey and has been carried forward to the present survey.

B. The 10³-fathom sounding in latitude 41°13.26', longitude 70°48.90' originates with H-6445 (1939). Since it falls near a slight rise in the bottom with a least depth of 10⁶ fathoms on the present survey, and was not disproved, it has been carried forward.

With the addition of the above two items the present survey is adequate to supersede the prior surveys in the common area.

7. Comparison with Chart 1210 (latest print date, 14th Ed., June 6, 1970, corr. thru N.M. 23/70)
 1107 (latest print date, 13th Ed., July 18, 1970, corr. thru N.M. 29/70)
 1108 (latest print date, 17th Ed., July 25, 1970)

A. Hydrography

The charted hydrography originates with the previously discussed surveys, which require no further consideration, supplemented by partial application of the boat sheet and verified smooth sheet of the present survey.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

Bombing Range Buoy "DD" charted in latitude 41°13.5', longitude 79°49.0' was established subsequent to the date of the present survey and reported in Notice to Mariners 21 of 1961.

The aid to navigation as presently charted adequately marks the feature intended.

8. Compliance with Instructions

The survey adequately complies with Project Instructions.

9. Additional Field Work

This survey is considered to be a good basic survey and no additional field work is recommended.

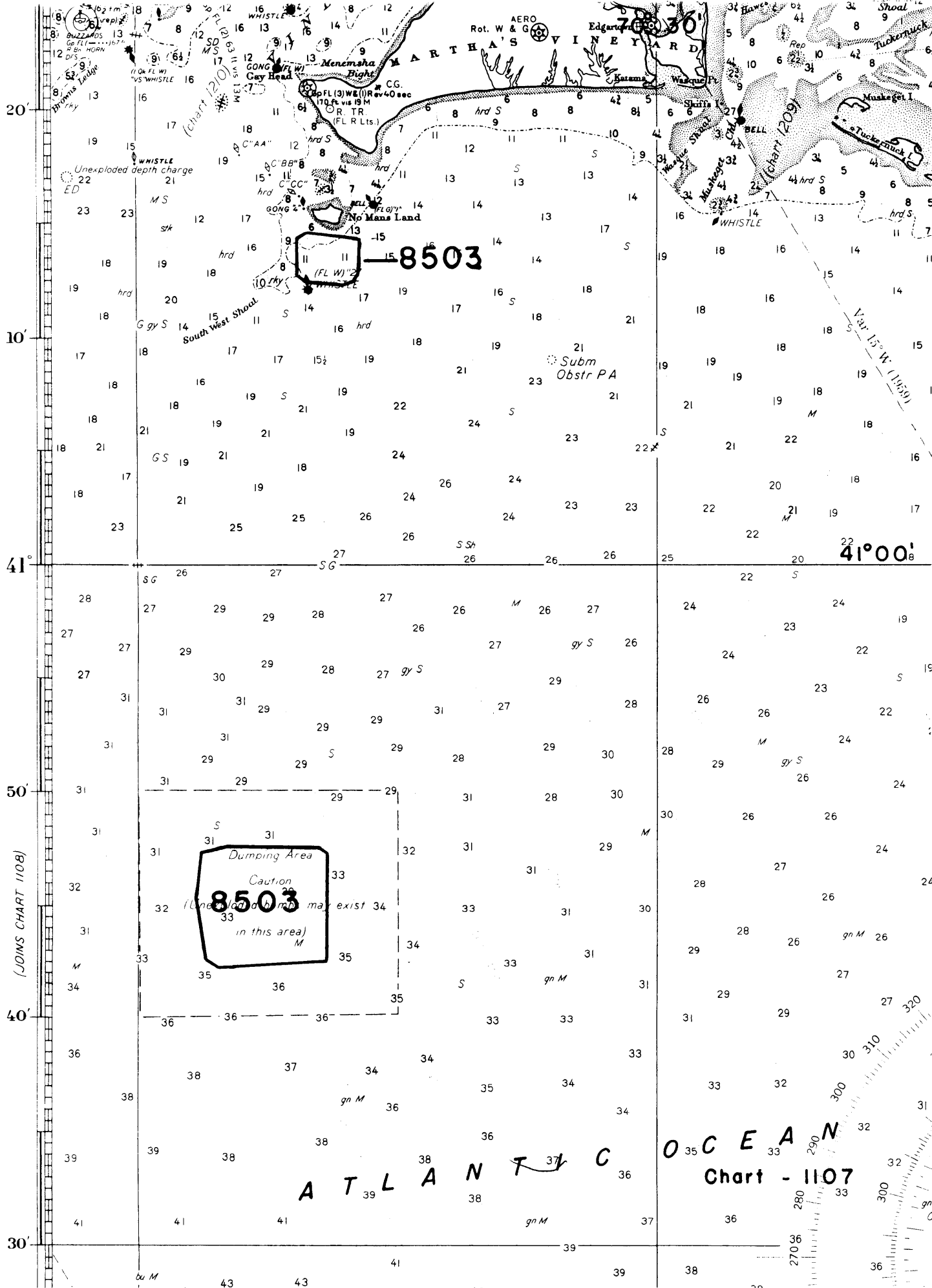
Examined and Approved:

R. H. Carstens

 Chief
 Marine Surveys Division

R. H. Howland

 Associate Director
 Office of Marine Surveys
 and Maps



NAUTICAL CHARTS BRANCH

SURVEY NO. H-8503

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2/25/60	1108	E. E. Thomas	Before ^{Before} Verification and Review Before ^{Examined} No. Corr. at this time
5-12-60	1210	R. E. Elkins	Before After Verification and Review Examined - no revisions. Not applied
4-25-61	1107	R. E. Elkins	Before After Verification and Review ^{Partly applied} thru chart 1108 dty 27. No revision.
2-25-61	71	R. E. Elkins	Before After Verification and Review ^{Partly applied} thru chart 1108 dty 27. No revision.
2-25-61	70	R. E. Elkins	Before After Verification and Review ^{Partly applied} thru chart 1108 dty 27. No revision.
10-4-61	1210	M. Rogers	^{Fully applied to reconstruction} Before After Verification and Review & before review.
Mar 19-71	1210	R. D. Sanocki	Before After Verification and Review & before inspection Dwg # 52 (Area B of Smooth Sheet) Fully Applied.
3/23/71	1107	S. McKellar	Before After Verification and Review & before inspection Area B thru 1210. Consider fully applied (Dwg # 24) Before After Verification and Review
3 May 71	71	R. D. Sanocki	Before After Verification and Review & before inspection Area A & B thru dty. 1107 (Dwg # 24). Consider fully applied (Dwg # 25)
8-3-71	70	KIRBY GEAN	^{AFTER VER & REVIEW} APP ^v BEFORE INSP thru chart 71 DRW # 25 NO CORR. SCALE TO SMALL
2-23-77	1210	JODY HARRIS	FULLY APPLIED AFTER VERIFICATION, REVIEW, & INSPECTION (AREA B OF SMOOTH SHEET) DWG # 58
3-22-77	1107	JODY HARRIS	FULLY APPLIED AFTER VERIFICATION, REVIEW, & INSPECTION (AREA B & C OF SMOOTH SHEET) DWG AID PROOF # 30 <small>M-2168-1</small>

(AREA B & C OF SMOOTH SHEET) DWG AID PROOF # 30 M-2168-1
AREA B APPLIED THRU CHART 1210

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.

