

9225

Diag. Cht. No. 1208-2

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. **PE-10-2-71**
Office No..... **H-9225**

LOCALITY

State **Massachusetts**
General Locality **Cape Cod**
Locality **North Shore**

1971

CHIEF OF PARTY
Bruce I. Williams

LIBRARY & ARCHIVES

DATE **December 14, 1976**

☆ U.S. GOV. PRINTING OFFICE: 1976-689-441

9225

Amel
Ch-
✓ 13006
✓ 13209
✓ 13249
✓ 13260
✓ 13200
✓ 13207
✓ 13205

HYDROGRAPHIC TITLE SHEET

H-9225

INSTRUCTIONS - 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.

PE-10-2-71

State Massachusetts

General locality Cape Cod

Locality NORTH SHORE
~~Race Point~~

Scale 1:10,000 Date of survey 10 June - 26 August, 1971

Instructions dated 27 April, 1971 Project No. OPR-473-PE-71

Vessel NOAA Ship PEIRCE Launch PE-1

Chief of party Cdr. Bruce I. Williams

Surveyed by LTJG Johnson, LTJG Hudes, LTJG Stokoe

Soundings taken by echo sounder, hand lead, pole Echo Sounder

Graphic record scaled by Ship personnel

Graphic record checked by Ship Officers L.G. Coam Verification, AMC

Protracted by Ship Officers Automated plot by --- CALCOMP 618
EDP, AMC

Soundings penciled by ---

Soundings in ~~MESEK~~ feet at MLW ~~MESEK~~

REMARKS: Verification by L.G. Coam

All corrections in red ink by L.G. Coam

~~Category 2 survey - verified survey - no further~~
~~processing to be done~~ * REVIEW has been completed
after "FINAL" chart application. 29 7/25/70
Applied to stds 1-6-77*
AB

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY PE-10-2-71 (H-9225)

NOAA Ship PEIRCE

SCALE 1:10,000

BRUCE I. WILLIAMS

CHIEF OF PARTY

A. PROJECT

This survey was accomplished under Project OPR-473-PE-71, ✓
Cape Ann to Cape Cod Massachusetts. PROJECT INSTRUCTIONS
dated 27 April, 1971, and CHANGE NO. 1--AMENDMENT TO PROJECT
INSTRUCTIONS dated 24 May, 1971, supersede all previous
instructions.

B. AREA SURVEYED

The general area is Cape Cod between Race Point and Peaked ✓
Hill Bar. The survey is bounded to the north along latitude
42° 07' by survey H-9011, 1:40,000, 1968, and to the east
along longitude 70° 06.5' by contemporary survey H-9226, (PE-20-1-71)
1:20,000, 1971. The southern boundary is along the high water
line of Cape Cod and with contemporary survey H-9224, (PE-10-1-71)
1:10,000, 1971. The western boundary is with ~~prior~~ survey
H-9013, 1:40,000, 1968. *contemporary*

Hydrography covered all inshore navigable areas. In the ✓
offshore portions junction was established on all boundaries
as stated above.

Hydrography commenced on 10 June 1971 and was completed on ✓
26 August 1971.

C. SOUNDING VESSEL

All hydrography was accomplished using launch PE-1. Launch ✓
positions are inked in blue. *on the boatsheet.*

D. SOUNDING EQUIPMENT

Raytheon 723 fathometer number 242 was used to obtain all ✓
soundings on this survey. Depths were recorded up to 207
feet. ~~of water.~~

Bar checks were taken twice a day as wind and sea conditions ✓
permitted. Bar check results were then tabulated and the

mean fathometer error at each depth determined.

For greater depths velocity corrections were obtained from a nansen cast oceanographic station. One cast was taken on 14 June, 1971, in latitude $42^{\circ} 05' 47''$, longitude $70^{\circ} 13' 04''$. Depth and temperature were recorded in the field. Salinities were determined by means of a salinometer carried aboard the PEIRCE. Results of the T&S observations were used to determine the layer velocities of sound. These values were graphed in conjunction with bar check values and correctors picked off in 0.2 foot increments.

The initial on the fathogram was maintained at 2.0 feet. Phase comparisons were made between scales. The results of the comparisons are discussed under TRA corrections.

E. SMOOTH SHEET

The smooth sheet will be plotted at the Atlantic Marine Center. Field records were encoded on punched paper tapes designed for computer use. All tapes were logged according to the formats given in the AMC Manual, chapter 3, dated June 30, 1971.

F. CONTROL

Visual control was used for all survey work. HI-FIX hyperbolic arcs were used as an aid for steering parallel lines. Three-point sextant fixes using triangulation and photogrammetric points were observed and the fixes plotted with a three-arm protractor.

Photogrammetric signals were located in the field by E. W. Hartford, chief of Photogrammetric Field Party 62. The signal positions were plotted and pricked on the following photogrammetric compilations:

Reviewed: Class I. Incomplete Manuscript TP-00165 1:10,000 Final Review - July 1973	Compilation complete pending field edit March 1971
Reviewed Class I Incomplete Manuscript TP-00166 1:10,000 Final Review July 1973	Compilation complete pending field edit May 1971

Signal positions were transferred from these manuscripts directly to the boat sheet.

To accomplish automated smooth processing, positions of

signals were scaled from the manuscripts in degrees, ✓
minutes, and meters of latitude and longitude.

Triangulation stations used for control as signals were ✓
placed on the boat sheet using geographic positions listed
as adjusted to North American 1927 Datum.

G. SHORELINE

Shoreline was transferred to the boat sheet from blue line ✓
manuscripts of the photogrammetric compilations listed in
section "P".

No portion of the shoreline required revision. The high ✓
water line was inspected and verified by the hydrographer.
The low water line was determined by taking the survey
launch as close to shore as possible during times of calm
sea and high water.

H. CROSSLINES

Crosslines were run at 13% of the total mileage of sounding ✓
lines. Crosslines were in excellent agreement.

I. JUNCTIONS

Junction was established with two prior surveys, H-9011 and ✓
H-9013, both accomplished by the ship PEIRCE in 1968. Depths
on these surveys were generally 4 feet shoaler in depths of
100 to 200 feet. Inspection of descriptive reports revealed
a velocity corrector of +2.5 feet at those depths where the
present survey has a corrector of less than +0.5 feet. In *S.S. junctions*
addition settlement and squat was not applied to the previous *satisfactory*
surveys but it is now known to be +0.9 foot for the ship.
Thus a correction of +3.4 feet brings the junction into good
agreement. Joins H-9226(0971) on the East and Joins H-9224 on the Southwest. Agreement
with both surveys was good.

J. COMPARISON WITH PRIOR SURVEYS

✓ Pre-survey Review Item #3 : The submerged tripod (181 feet ✓
reported) charted in latitude $42^{\circ} 06.28'$, longitude
 $70^{\circ} 13.88'$, established by the U.S. Navy was not indicated
by any fathometer trace. No action was required. No longer charted

✓ Pre-survey Review Item #91: The submerged tripod (181 feet ✓
reported) charted in latitude $42^{\circ} 05' 14.7''$, longitude
 $70^{\circ} 15' 12.1''$, established by the U.S. Navy was not
indicated by any fathometer trace. No action was No longer charted
required.

Pre-survey Review Item #92: The visible wreck charted in latitude $42^{\circ} 04' 45.6''$, longitude $70^{\circ} 13' 17.2''$ was investigated on day 187. No portion of the wreck was visible during this survey. Reportedly a portion was seen after a storm at low water by a coast guardsman at Race Point, but a sand bar normally covers the wreck. Development of the area defined the bar as baring at MLW and it is felt that the wreck symbol should be removed from the chart. *Sand bar covers wreck and bars at MLW. WK no longer checked*

Pre-survey Review Item per Project Instructions: Submerged tower (covered 3 feet) PA, latitude $42^{\circ} 05.0'$, longitude $70^{\circ} 13.9'$, marked by two black buoys was searched for on day 187. No indication of the tower was found. The Naval Electronics Center located at Race Point Coast Guard Station had no knowledge of the tripod. There were no buoys marking it and development of the area failed to locate this feature. It is believed that the tower is no longer in this location. *THIS ITEM HAS BEEN REMOVED FROM THE CHART BY THE AUTHORITY OF CHART LETTER 1295(73). Concur X.W.W.*

Questionable Soundings

A questionable sounding (0 feet at MLW) was found at latitude $42^{\circ} 03.95'$, longitude $70^{\circ} 14.8'$, on day 161. The area was developed on day 187 and no verification of the questionable sounding was found. The stray signal on the fathogram which produced this questionable sounding ~~was apparently caused by kelp.~~ *is considered invalid.*

K. COMPARISON WITH CHARTS

Comparison with charts 1208 (Oct. 1970) and 580 (Dec. 1970) shows relatively good agreement outside the 18 foot depth curve with the exception of one area. The sand bar between $70^{\circ} 10.3'$ and $70^{\circ} 11.2'$ at $42^{\circ} 05.3'$ (C&GS 580) was found to extend to $42^{\circ} 04.5'$ and $70^{\circ} 06.5'$. The area inside the 18 foot curve, however, was found to be changed considerably. Shoals and sand bars have moved around considerably. The high water line compares quite favorably considering the shifting nature of the dunes. *See review - Section 7*

L. ADEQUACY OF THE SURVEY

This survey is considered complete and adequate to supersede prior surveys for charting.

M. AIDS TO NAVIGATION

A total of three aids to navigation were located. Their positions agreed well with the positions on chart 1208.

Pos # 365	Orange and white Can Buoy "D"	Note: Not found on chart 1208
Pos # 366	" " " Nun Buoy "F"	
Pos # 367	Lighted Whistle Buoy "B"	20Ed. 1 Nov 75

The position and description of Race Point Lighted Buoy "B" (Light List Number 50.50) agreed with the information found in Light List, Atlantic Coast, Volume I.

N STATISTICS

Number of positions - 1736 ✓
Hydro nautical miles - 220.5
Bottom samples - 58
Square nautical miles surveyed - 16.7
Crossline nautical miles - 27.7
Nansen casts - 1

O. MISCELLANEOUS

All hydrography was recorded and smooth logged on the 0° time meridian (GMT). ✓

P. REFERENCES TO REPORTS

REPORT ON CORRECTIONS TO ECHO SOUNDINGS, OPR-473-PE-71 ✓
SEASONS REPORT, NOAA SHIP PEIRCE, 1971 FIELD SEASON

Very Respectfully

John O. Rolland
for Peter S. Hudes
LTJG, NOAA

Approved and Forwarded

Bruce I. Williams
Bruce I. Williams
Cdr., NOAA
Commanding Officer
NOAA Ship PEIRCE

APPROVAL SHEET

SURVEY PE-10-2-71 (H-9225)

Field work and data processing on this survey was under my immediate daily supervision. The boat sheet and all records have been reviewed and are approved. This survey is complete and adequate to supersede prior surveys for charting.



Bruce I Williams
Cdr., NOAA
Commanding Officer
NOAA Ship PEIRCE

3/11/75

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for Form 362

Tide Station Used (NOAA Form 77-12): Peaked Hill Bar

Period: June 10 - August 26, 1971

HYDROGRAPHIC SHEET: H-9225

OPR: 473

Locality: Off the northern tip of Cape Cod

Plane of reference (mean ~~lower~~ low water): June and July 4.3 ft.
Aug. 19-Sept. 7 5.0 ft.

Height of Mean High Water above Plane of Reference is 8.5 ft.

Remarks: Recommended zoning:

Range Ratio:

5 West of $70^{\circ}15'$ x 1.10
4 From $70^{\circ}13'.5$ to $70^{\circ}15'$ x 1.07
Zone 3 From $70^{\circ}12'$ to $70^{\circ}13'.5$ x 1.05
2 From $70^{\circ}10'.5$ to $70^{\circ}12'$ x 1.02
1 From $70^{\circ}08'$ to $70^{\circ}10'.5$ Zone direct
From $70^{\circ}04'$ to $70^{\circ}08'$ x 0.98

James R. Hubbard
per Chief, Tides Branch

LIST OF SIGNALS

<u>EBP #</u>	<u>SOURCE</u>
001	Pilgrim Monument, 1909
002	Race Point Lighthouse, 1877
004	TP-00165
006	West*
008	TP-00165
010	"
012	"
014	"
016	"
018	Mid*
020	TP-00165
022	"
023	"
024	"
026	East*
028	TP-00165
030	"
031	"
032	"
034	"
036	"
038	"
040	"
041	"
042	TP-00166
044	"
046	"
048	"
050	"
052	"
053	"
054	"
056	"
058	"
060	"
062	"
064	"
066	"
068	"
070	"
072	"
074	"

*U. S. NAVY Foracs Stations established by 2nd Order Triangulation
See attached memo for source of these stations.

CAM3-1
1/31/74

ATLANTIC MARINE CENTER

PROJECTION PARAMETERS

POLYCONIC OR MODIFIED TRANSVERSE MERCATOR

1. Project No. OPR-473 4. Requested By -----
2. Reg. No. H-9225 5. Ship or Office Verification Branch
3. Field No. PE-10-2-71 6. Date Required -----

7. Polyconic Modified Transverse Mercator

8. Central Meridian of Projection 70 ° 10 ' 30 "

9. Survey Scale: 1: 10,000

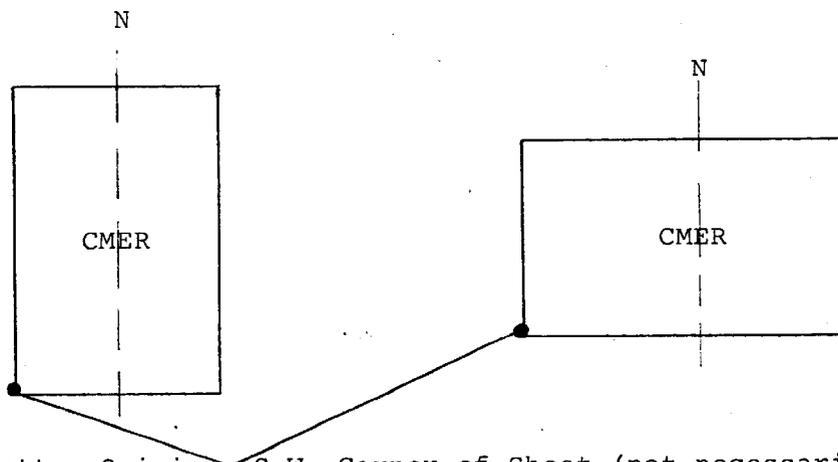
10. Size of Sheet (check one):

36 x 54 36 x 60 Other Specify _____

11. Sheet Orientation (check one):

NYX = 1

NYX = 0



12. Plotter Origin: S.W. Corner of Sheet (not necessarily a grid intersection)

Latitude 42 ° 02 ' 45 "

Longitude 70 ° 16 ' 02 "

13. G.P.'s of triangulation and/or signals attached

14. Material Desired: Tracing Paper Mylar

Smooth Sheet Other Specify _____

15. Remarks: _____

GEOGRAPHIC NAMES

H-9225

Name on Survey	Source of Name											
	A	B	C	D	E	F	G	H	K			
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	GRAND MANALLY ATLAS	U.S. LIGHT LIST				
Atlantic Ocean	1208											1
Cape Cod /												2
Race Point /												3
PEAKED HILL BAR												4
HATCHES HARBOR												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
												16
												17
							APPROVED					18
							<i>Chas. E. Harrington</i>					19
							CHIEF GEOGRAPHER - C3x5					20
							12 FEB. 1979					21
												22
												23
												24
												25

November 22, 1976

Survey H-9225 (PE-10-2-71) OPR-473

The only problem encountered was due to positional displacement at the shoreline. Several soundings plotted on or above the high water line. These positions had to be adjusted to agree with the shoreline and the 0 foot curve.

The depth contours used on the sounding overlay were all standard curves from the 0 foot to the 180 foot curve. No supplemental or special curves were required to define bottom contours.

Crosslines were run at 13% of the main scheme. Agreement was very good, usually within one foot or less.

The developments run during this survey were in search of specific items; none were to locate a least depth. Since nothing was located in the developments their only value is in adding accuracy to the contours.

Only two surveys were available for junction. H-9224 junctioned to the southwest with good agreement generally; however, the extremely steep slope of the bottom at Race Point caused some difficulties. H-9226 junctioned to the east with good agreement. The 0 foot curve may require a small amount of additional adjustment.

This survey was compared to charts #580, 7th edition, dated March 2, 1974 and #1208, 19th edition, dated December 7, 1974. The comparison was good with both charts, especially #580 which was revised and published in 1974.

This survey was well done and adequately defines the bottom features of the survey area. No additional work is recommended.

Respectfully Submitted,

William L. Jonns

William L. Jonns
Chief, Verification Branch
AMC

Additional Notes for H-9225

The one sounding volume included with the survey records was used to record Bar checks and hydro notes. There were no signatures in this volume to indicate who recorded these notes.

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-9225

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & smooth PNO & excess overlays		1	BOAT SHEETS (1 part, mylar)		1	
DESCRIPTIVE REPORT		1	OVERLAYS		6	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
RECORDS ENVELOPES	1		1			
CAHIERS	1		1			
VOLUMES	1					
BOXES			1-smooth P/O, sndg. vol., misc. P/O			

T-SHEET PRINTS (List) not received from field (00165) mcr
TP-00165 and TP-00166

SPECIAL REPORTS (List)
Velocity Corrections

OFFICE PROCESSING ACTIVITIES
The following statistics will be submitted with the cartographer's report on the survey

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				1736
POSITIONS CHECKED		173		
POSITIONS REVISED		25		
DEPTH SOUNDINGS REVISED		50		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		0		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		19	26	
JUNCTIONS		4	20	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		56	25	
SPECIAL ADJUSTMENTS		4		
ALL OTHER WORK		111	65	
TOTALS		194	136	

PRE-VERIFICATION BY W.L. Jonns and M.B. Hickson	BEGINNING DATE 01/24/73	ENDING DATE 12/11/75
VERIFICATION BY L.G. Cram (194 hrs) W.L. Jonns 30 hrs	BEGINNING DATE 05/15/76	ENDING DATE 06/09/76
REVIEW BY W.L. Jonns	BEGINNING DATE 06/12/76 10/6/78 11/15/76	ENDING DATE 07/11/78 11/22/76

Conserv. Inspection *[Signature]* 41 hrs.

OFFICE OF MARINE SURVEYS AND MAPS
HYDROGRAPHIC SURVEYS DIVISION
MODIFIED HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9225

FIELD NO. PE-10-2-71

Massachusetts, Cape Cod, North Shore

SURVEYED: June 10 - August 26, 1971

SCALE: 1:10,000

PROJECT NO.: OPR-473

SOUNDINGS: Raytheon DE-723 Depth Recorder

CONTROL: Sextant Fixes on
Shore Signals

Chief of Party	B. I. Williams
Surveyed by	D. Johnson
.....	P. S. Hudes
.....	J. R. Stokoe
Automated Plot by	Calcomp 618 (AMC)
Verified by	L. G. Cram
Reviewed by	L. Quinlan
	Date: July 11, 1978
Cursory inspection made--survey	K. W. Wellman
processing considered complete	December 15, 1978

1. Control and Shoreline

The origin of the control is adequately discussed in part F of the Descriptive Report.

A discrepancy of approximately 10 meters exists between the smooth plotted position of control station 018 and the T-sheet (TP-00165) position of the landmark tower which corresponds to station 018. This station is identified as a U.S. Navy second-order triangulation station in the Descriptive Report of the present survey and is smooth plotted in accordance with the official published position. The Coastal Mapping Division (Quality Control Group) has been informed of the noted discrepancy. No revision of the T-sheet position is considered necessary, however, since the magnitude of the discrepancy is relatively negligible at the charting scale.

The shoreline originates with final reviewed topographic manuscripts TP-00165 and TP-00166 of 1970/71.

The mean high water line is shown for guidance only. Its true position is shown on the topographic manuscripts previously mentioned.

2. Hydrography

- a. Depths at crossings are in good agreement.
- b. The usual depth curves are adequately delineated. The 3-foot curve was added to delineate significant inshore features.
- c. The development of the bottom configuration and investigations of least depths are considered adequate.

3. Condition of Survey

The sounding records, smooth plotting, Descriptive Report, and printouts are adequate and conform to the requirements of the Hydrographic Manual and the Instruction Manual - Automated Hydrographic surveys.

4. Junctions

Since adjoining survey H-9226 (1971) on the east is not presently available, the adequacy of its junction with the present survey will be discussed in its Review Report. The junctions with H-9013 (1968) on the northwest, H-9224 (1971) on the southwest, and H-9011 (1968) on the north have been discussed in the respective Review Reports of those surveys.

5. Comparison with Prior Surveys

a.	H-516	(1854-55)	1:80,000
	H-519	(1855-56)	1:40,000
	H-645	(1833-35)	1:10,650
	H-1951	(1889)	1:10,000
	H-1952	(1889)	1:10,000

The listed prior surveys fall in the area of the present survey but are not discussed in the present review. The latter two surveys of 1889 are superseded by H-5400 discussed below.

b.	H-5400	(1933)	1:20,000
	H-8413	(1957)	1:100,000 (unverified)

These prior surveys cover most of the area of the present survey. A comparison between the present and prior surveys reveals depth differences as great as ± 13 feet in general depths less than 30 feet. In depths exceeding 30 feet, depth differences vary within a range of ± 2 to 3 feet. The shoreline has accreted and eroded in a random fashion within a range of approximately 80 meters. The noted depth and shoreline differences are attributed to shifting sand bottom sediments and to the less detailed and less accurate methods employed on the prior surveys.

The present survey is adequate to supersede the prior surveys within the common area.

7. Comparison with Chart 13249 (580), 9th Edition, December 24, 1977
13246 (1208), 21st Edition, January 22, 1977

a. Hydrography

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

Attention is directed to the following:

(1) The following depths charted from Bp-78957 and 78958 (1970) have not been disproved by the present survey and should be retained on the chart.

(a) 18 feet in latitude $42^{\circ}05.42'$, longitude $70^{\circ}11.37'$

(b) 17 feet in latitude $42^{\circ}05.40'$, longitude $70^{\circ}12.22'$

(c) 11 feet in latitude $42^{\circ}04.80'$, longitude $70^{\circ}14.08'$

(d) 4 feet in latitude $42^{\circ}04.57'$, longitude $70^{\circ}14.25'$

(2) The geographic name "Peaked Hill Bar" should be added to the next edition of chart 13249.

(3) The 58-foot sounding charted in the vicinity of latitude $42^{\circ}05.75'$, longitude $70^{\circ}07.40'$ first appeared on the 1921 edition of chart 1208 and originates with an unascertainable source. The sounding is considered presently invalid and should be deleted from the chart.

(4) Although the Record of Application to charts for this survey indicates that a final application of the present survey has been made, a subsequent review has revealed that the above revisions should be made.

The present survey is considered adequate to supersede the charted hydrography within the common area except as noted in (1) above.

b. Aids to Navigation

There are no floating aids to navigation presently charted within the area of the present survey.

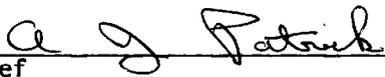
7. Compliance with Instructions

This survey adequately complies with the project instructions.

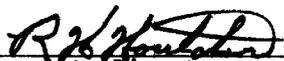
8. Additional Field Work

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

Examined and Approved:



Chief
Hydrographic Surveys Division



Associate Director
Office of Marine Surveys
and Maps

Reg. No. H-9225

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey the following shall be completed:

CARDS CORRECTED

DATE _____ TIME REQ'D _____ INITIALS _____

REMARKS:

Reg. No. _____

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE _____ TIME REQ'D _____ INITIALS _____

REMARKS:

ATLANTIC MARINE CENTER
APPROVAL SHEET
FOR
AUTOMATED SURVEY H-9225

- A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position printout has/~~has~~ been made. A new final sounding printout has/~~has~~ been made.

Date: Nov 22, 1976

Signed: William J. Jones
Title: Chief, Verification Branch

- B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic and AMC Manuals. Exceptions are listed in the verifier's report.

Date: 12/6/76

Signed: Robert A. Frank
Title: Chief, Processing Division

FROM DIAGRAM CHT. 120842.

