

9542

W

Diag. Cht. No. 1000-3 & 1217-2

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. .... MI-40-2-75 .....  
Office No. .... H-9542 .....

LOCALITY

State ..... NEW JERSEY .....  
General Locality ... OFF. THE EAST COAST .....  
Locality ..... CAPE MAY - ATLANTIC CITY .....

1975

CHIEF OF PARTY  
R. M. Buffington

LIBRARY & ARCHIVES

DATE ..... 4/12/76 .....

9542

Areas 1 & 2

Chart:

- 1217. Applied 5/20/77 JP
- 1108.
- 1109 Applied 8/18/77 RLH
- 1000

DESCRIPTIVE REPORT

HYDROGRAPHIC SURVEY MI-40-2-75

H-9542

OPR-517-MI-75

CAPE MAY TO ATLANTIC CITY, N.J.

26 JUNE, 1975 to 10 AUGUST, 1975

NOAA SHIP MT. MITCHELL, (MSS-22)

Ronald M. Buffington  
Commander, NOAA  
Commanding Officer

HYDROGRAPHIC TITLE SHEET

H-9542

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.

MI-40-2-75

State New Jersey

General locality Off the East Coast  
Northeast Atlantic Coast

Locality Offshore Cape May to Atlantic City

Scale 1:40,000 Date of survey 26 June 1975

Instructions dated 27 March 1975 Project No. DPR 517-MI-75

Vessel NOAA Ship Mt. Mitchell MSS-22

Chief of party Ronald M. Buffington, Commander, NOAA

Surveyed by \_\_\_\_\_

Soundings taken by echo sounder, ~~and type~~ Ross Fineline Echo Sounder

Graphic record scaled by Ship Personnel

Graphic record checked by \_\_\_\_\_

Protracted by Plotted by Calcomp-618 AMC Automated plot by Hydroplot System,  
NOAA Ship Mt. Mitchell

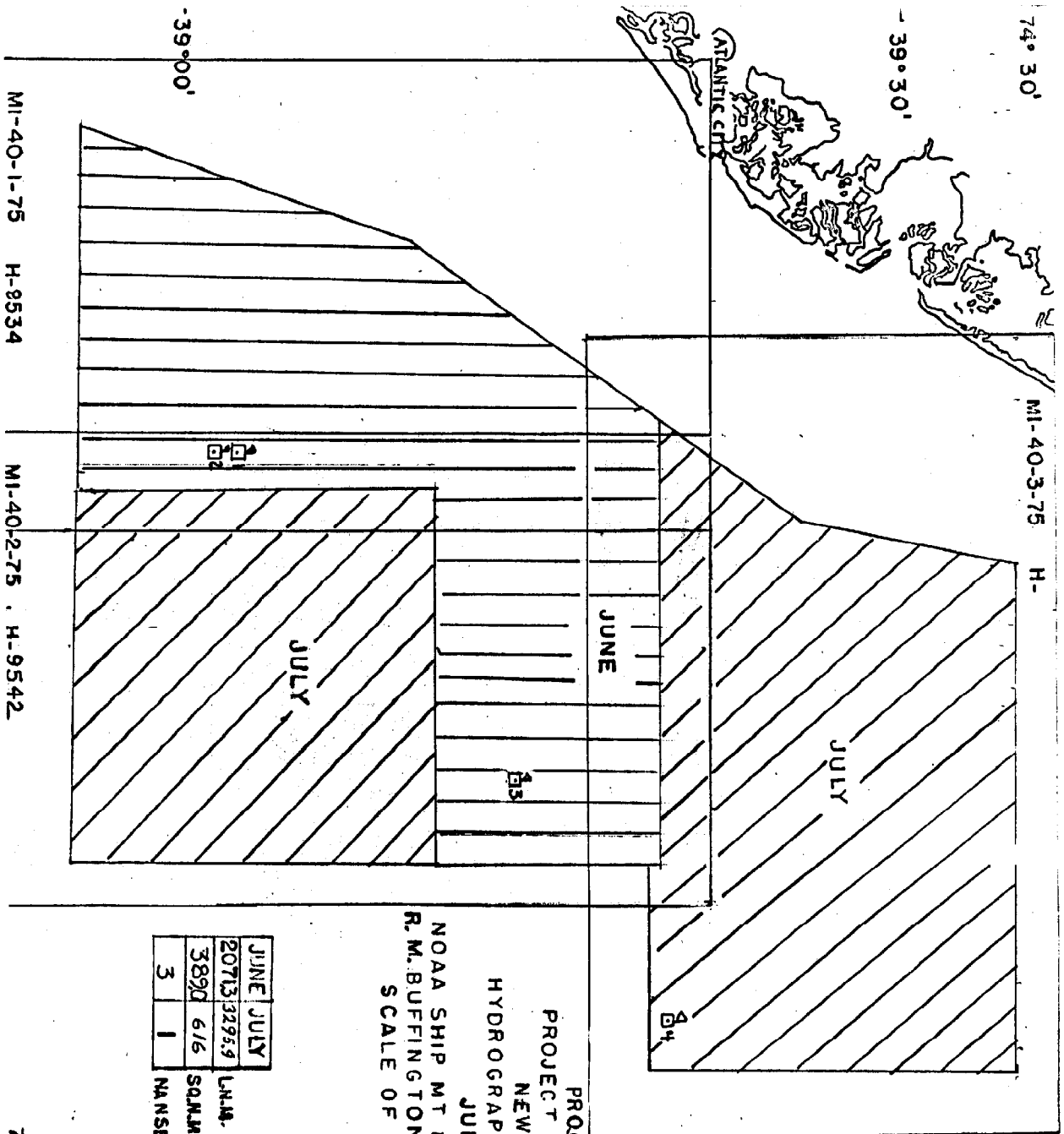
Soundings penciled by \_\_\_\_\_

Soundings in ~~feet~~ Smooth Sheet feet at MLW Smooth Sheet verified by:  
B.J. Stephenson 2-11-76

REMARKS: 1. Instructions Change #1, 14 April 1975;

Applied to state 11/4/76  
[Signature]

X.W.V.



PROJECT OPER-517-MI-75  
 NEW JERSEY  
 HYDROGRAPHIC OPERATIONS  
 JUNE-JULY 1975  
 NOAA SHIP MT MITCHELL (MSS-2)  
 R.M. BUFFINGTON, CDR, NOAA, COM  
 SCALE OF CBGS 1108

LEGEND

JUNE	JULY	LN.M. SOUNDING LINE(SHP)
20713	32959	SOUNDING AREA(SHI)
3890	616	MANSEN CAST(SERIAL TEMP.)
3	1	

MI-40-1-75 H-9534  
 MI-40-2-75 H-9542  
 74° 30'  
 39° 30'  
 39° 00'  
 ATLANTIC CITY  
 MI-40-3-75 H-  
 73° 30'

A. PROJECT:

This survey, MI-40-2-75 (H-9542), was conducted by the NOAA Ship MT MITCHELL MSS-22 as a <sup>or</sup> portion of Project "ASAP", OPR-517, New York Bight Phase in accordance with Project Instructions dated 27 March 1975, and Change No. 1 dated 14 April 1975.

B. AREA SURVEYED:

This survey was conducted offshore of the Atlantic Coast between Cape May and Atlantic City, New Jersey, generally between the 18 and 22 fathom curve. The survey limits are described as the line connecting the following corner points in a clockwise direction:

Lat. 38° 52.0' N	Long. 74° 09.5' W
39° 22.0' N	74° 09.5' W
39° 22.0' N	73° 44.0' W
38° 52.0' N	73° 44.0" W

Hydrography was conducted for this survey on the following dates:

26 June (JD 177) to 3 July (JD 184) 1975  
11 July (JD 192) to 17 July (JD 198) 1975  
9 August (JD 221) to 10 August (JD 222) 1975

C. SOUNDING VESSEL:

*H-9542*

All soundings for MI-40-<sup>2</sup>~~7~~-75 were obtained by the NOAA Ship MT MITCHELL MSS-22 (vessel number 2220 on all survey records) utilizing a fully automotated HYDROPLOT SYSTEM. Digitized soundings and electronic control data were entered into a Digital PDP-8E computer (serial number 8503) via a NOS Hydroplot Controller. Soundings and positions were punched on paper tape, recorded on teletype printouts and plotted automatically by a Complot DP-3 roll plotter.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS:

All soundings were obtained by a Ross Laboratories Model 5000 Fineline Recorder, (serial number 1052) using two skeg mounted transducers and a Ross Model 4000 transceiver (serial number 1050). All soundings were digitized to the nearest tenth of a foot by a Ross 6000 Depth Digitizer (serial number 1039-2).

All graphic records were scanned by survey personnel and checked by the officer in charge. Significant peaks and deeps that occurred between soundings were inserted, errors were corrected, and the effects of seas were meaned and corrected on a corrector tape.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS (CONT'D.):

Phase calibration checks were made at frequent intervals to check for fathometer belt speed. Adjustments were made as necessary, and were noted on the fathogram and in the sounding volume. Departures of the trace due to phase differences were corrected during the scanning process.

On 29 June 1975, a Nansen cast was deployed at Latitude 39° 13.0' N., Longitude 73° 46.5' W. From the temperature and salinity data obtained by this cast, layer corrections for the velocity of sound were computed. The values placed on the velocity tape employed during the final smooth plotting of the boat sheets were only the correctors applicable at the location of each Nansen bottle. After all smooth plotting of the sheet had been finished, it was noted that the velocity tape was not in accordance with Hydrographic Instructions.

The curve graphically portraying depth versus correctors to be applied was constructed. From this graph, every two-tenths of a foot difference in velocity correctors and their corresponding depths were compiled into a proper velocity table and tape. Printouts of both tapes are included with this report. The maximum discrepancy in the soundings due to the use of the improper velocity tape are six-tenths of a foot for depths from 16.4 feet to 32.7 feet. No soundings were obtained within this range. All other discrepancies were less than one half foot. Because of this fact, the boat sheet was not replotted. It is recommended that when replotted at AMC, the corrected velocity tape, included with data tapes, be employed.

*Apparently no VC comparison of instrument depth records were determined or applied.*

A number of draft readings were taken throughout the course of MI-40-2-75. During the on line process, a draft correction of 14 feet was applied to all soundings. Changes of the draft are incorporated in the TC/TI tape included with the survey data (A printout of the tape is included with this report).

Settlement and Squat correctors were determined on 22 July 1974 in Mayport, Florida. An abstract of the settlement and squat correctors versus engine "RPM" is included with this report.

The survey was conducted using predicted tides based on daily predictions for Sandy Hook, New Jersey as found in the Tide Tables for 1975. A copy of the request for actual tides for the area surveyed is included with this report.

E. HYDROGRAPHIC SHEET:

The smooth sheet of MI-40-2-75 will be prepared at the Atlantic Marine Center, Norfolk, Virginia. The following tapes and their respective printouts will be forwarded to CAM-3 with this report:

E. HYDROGRAPHIC SHEET (CONT'D.):

Master Range Range Data Tapes  
 Electronic Corrector Tape  
 Parameter Tape  
 ASCII Signal Tape  
 Velocity Tape (Revised 21 August 1975)  
 Transducer Corrector/Table Indicating Tape

This survey was plotted on three Complot roll plotter sheets with a skew of 0° 22' 36". A printout of the parameter tapes accompanies this report. The Boat Sheet was smooth plotted off-line with an electronic corrector tape and an incorrect velocity tape.

F. HYDROGRAPHIC POSITION CONTROL: \*

A Decca Range Range HIFIX system, operating at a frequency of 1799.60 KHZ, was the control for the survey. The two shore stations were located at:

Signal Number	Station Name	Latitude	Longitude
005	Cape May (H-AMC-1-NJ-75)	38° 56' 12.689"N	74° 53' 44.342"W
015	Barnegate (ZIMM, 1975)	39° 45' 44.159"N	74° 06' 19.764W

The Shore Stations were located by the National Ocean Survey, Atlantic Marine Center.

The HIFIX Calibration was accomplished using three point sextant fixes with a check angle. All computations employed the hydroplot calibration program ~~AK~~ 561. Only fixes with an inverse distance of less than five meters were considered acceptable in establishing the mean lane count.

The calibration area was located four miles offshore of Atlantic City. When it became desirable to determine the validity of whole lane count one of two calibration buoys (B-1 & B-2 respectively) was circled. These buoys were constructed and established in the working area by the NOAA Ship MT MITCHELL, MSS-22. A number of navigational aid buoys were also used in determining lane count.

Name	Latitude	Longitude
B-1	39° 13.5'N	73° 51.4'W
B-2	39° 04.1'N	74° 05.5'W
Avalon Shoals	39° 05.4'N	74° 34.0'W
"2FB"	38° 58.2' N	74° <del>31.5</del> W 31.5 W

The lane count was constantly monitored by members of the Survey Department by comparing the HIFIX goniometer with a running count being recorded on the sawtooth recorder. Due to the frequent instability of the system, the sawtooth was continuously manned and records scanned on line so that all lane jumps could be caught and corrected.

\* Sections F and G are combined

F. HYDROGRAPHIC POSITION CONTROL (CONT'D.);

Although the ship's maximum distance from either of the shore stations was 56.2 miles, a number of problems with the HIFIX resulted in many costly delays and the rejection of data. Lane jumps were due to adverse atmospheric conditions and equipment failure. Another factor affecting lane count was the frequent mis-application of lane losses or gains in the Hydroplot Controller. An abstract of the total electronic correctors applied is inserted in the appendices.

H. SHORELINE:

There was no shoreline within the survey limits.

I. CROSSLINES:

Crosslines were run to the extent of 5% of the regular sounding lines. Agreement was generally within a foot.

J. JUNCTIONS:

Survey MI-40-2-75<sup>H-9542</sup> junctions well with MI-40-1-75 (H-9534) to the west. Most soundings were in general agreement, the maximum discrepancies being only one to two feet, and found in the relatively steeper slopes at the northwest corner of the sheet.

Junction soundings to the north with MI-40-3-75 (H-9552) were all within a foot of each other with no set pattern. Depth curves continued across the junction with no distortion.

MI-40-2-75<sup>H-9542</sup> junctions to the east with MI-80-1-75<sup>H-9553</sup> which has not yet been completed. Junctions between the two sheets will be discussed in the Descriptive Report for that sheet.

K. PRIOR SURVEYS:

- ▲ Prior surveys conducted in the area of this survey are as follows:

Registry Number	Scale	Date of Survey
H-6217	1:40,000	1937
H-6219	1:120,000	1937
H-6264	1:40,000	1937
H-6345	1:80,000	1938
WIRE DRAG FB NO. 5	1:40,000	1951

All soundings were in fathoms. The prior survey's soundings coincided well with MI-40-2-75<sup>H-9542</sup> soundings at all depths.

There were no pre survey review items to be investigated.



L. COMPARISONS WITH THE CHART:

The area surveyed is contained on Chart No. 12120 at 1:400,000 scale. All soundings compared well with the chart. The three wire dragged wrecks indicated on the chart did not show up on the fathograms.

*(see 1 section, soundings enclosed by triangles, Pre-Survey Review,*

M. ADEQUACY OF THE SURVEY:

*OPR-517, 3-21-75*

This investigation is complete and adequate to supersede all prior work in the area.

N. AIDS TO NAVIGATION:

There were no aids to navigation within the survey limits.

O. STATISTICS:

Linear Nautical Miles Sounding Lines	1959.9
Crosslines	98.5
Developments	236.1
Total Linear Nautical Miles of Hydro	2295.5
Total Linear Miscellaneous Miles	1357.0
Total Linear Miles Run	3652.5
Square Miles of Hydro	48
Total Positions	2266
Nansen Casts	1
Bottom Samples	1

*obtained by George B. Kelez FRS-41 017  
and plotted on Smooth Sheet and*

P. MISCELLANEOUS: *entered in Survey records.*

None

Q. RECOMMENDATIONS:

None

R. AUTOMATED DATA PROCESSING:

The following programs were utilized to complete this survey:

Program	Title	Version Date
RK 111	Range Range Real Time	8-7-74
RK 201	Grid Signal & Lattice Plot	4-18-75
RK 211	Range Range Non Real Time	8-16-74
RK 337	Unscrambler	8-8-74
PM 360	Electronic Tape Abstract	3-21-74
AM 500	Predicted Tide Generator	11-10-72
RK 530	Layer Corrections for Velocity	6-25-74
RK 561	H/R Geodetic Calibration	2-19-75
RK 602	Elinore Line Editor	5-21-75

S. REFERENCE TO REPORTS:

None.

Respectfully submitted,

*Richard E. Marriner II*

Richard E. Marriner II  
Ensign, NOAA

VELOCITY CORRECTIONS FOR SURVEY H 9542.

*Depth from surface*

TABLE NUMBER 1. UNIT IS FEET.

DEPTH+TRA	VELOCITY CORRECTION
15.0	0.0
19.1	0.2
23.6	0.4
28.2	0.6
33.0	0.8
38.2	1.0
44.0	1.2
50.1	1.4
57.4	1.6
66.0	1.8
77.0	2.0
91.8	2.2
110.1	2.4
130.4	2.6
99999.9	2.8

*Take correction for sounding plus Tra*

P.O. CHECKED BY *BJ5*  
DATE *2-11-76*  
VERIFICATION BR., ANC

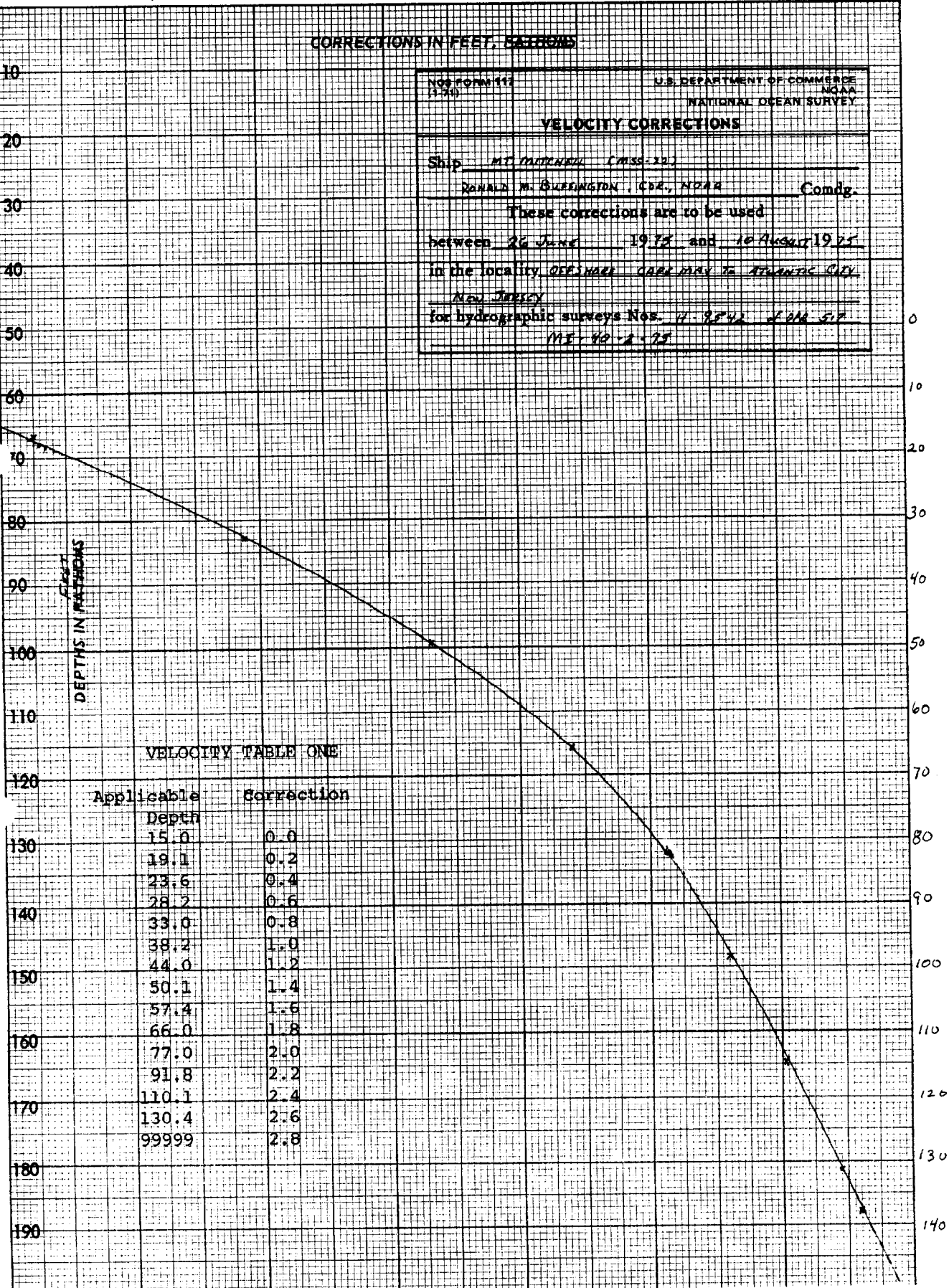
0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8  
 (Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET, FATHOMS

U.S. DEPARTMENT OF COMMERCE  
 NATIONAL OCEAN SURVEY  
**VELOCITY CORRECTIONS**  
 Ship MT. MARSHALL (MISS. 20)  
RONALD M. BUCKINGTON, CDR., NOAA Comdg.  
 These corrections are to be used  
 between 26 JUNE 1975 and 10 AUGUST 1975  
 in the locality OFF SHORE CARLISLE ATLANTIC CITY  
NEW JERSEY  
 for hydrographic surveys Nos. V. 9542 I 004 517  
ME 40-2-75

(For deep water add 0 to these figures)

DEPTH IN FATHOMS



VELOCITY TABLE ONE

Applicable Depth	Correction
130	15.0
130	19.1
130	23.6
130	28.2
140	33.0
140	38.2
140	44.0
150	50.1
150	57.4
150	66.0
160	77.0
160	91.8
160	110.1
170	130.4
170	99999
180	
190	

22 July 1974

NOAA Ship MT MITCHELL MSS-22

Abstract of Settlement and Squat Correctors

RPM'S	S+S Correctors (ft)	S+S Correctors (ft)
105	0.0	0.0
110	0.045	0.0
120	0.140	0.1
130	0.225	0.2
140	0.300	0.3
150	0.356	0.4
160	0.403	0.4
170	0.440	0.4
180	0.472	0.5
190	0.500	0.5

Computed by: Evelyn J. Fields

Checked by: David Pasciuti

SIGNAL NAMES LIST  
SOUTH COAST OF NEW JERSEY

005	H-AMC-1-NJ-1975	AMC OPER DIV
015	ZIMM, 1975	AMC OPER DIV
050	WILDWOOD, STANDPIPE, 1928	VOL 1 P328
060	NORTH WILDWOOD, NORTH STANDPIPE, 1962	VOL 2 P97
070	STONE HARBOR, COAST GUARD STATION CUPOLA, 1932	VOL 2 P95
080	STONE HARBOR WATER TANK, 1962	VOL 2 P94
090	AVALON STANDPIPE, 1932	VOL 2 P65
120	OCEAN CITY STANDPIPE, 1962	VOL 2 P89
130	OCEAN CITY FLANDERS HOTEL CUPOLA, 1962	VOL 2 P90
140	OCEAN CITY WATER TANK, 1962	VOL 2 P88
150	MARGATE CITY STANDPIPE, 1962	VOL 2 P86
160	MARGATE CITY WATER TANK, 1962	VOL 2 P86
170	RITZ AERO BEACON, 1931	VOL 2 P101
180	ATLANTIC CITY, CLARIDGE HOTEL, (DOME), 1932	VOL 1 P31
190	ABSECON LIGHT, 1931	VOL 2 P105
200	ATLANTIC CITY MUNICIPAL WATER TANK, 1962	VOL 2 P115
210	HOTEL, 1962	VOL 2 P108
220	HOLGATE WATER TANK, 1962	VOL 2 P216
230	BEACH HAVEN WATER TANK, 1975	AMC OPER DIV
240	LONG BEACH WATERWORKS STANDPIPE, 1962	VOL 2 P210
260	SURF CITY STANDPIPE, 1962	VOL 2 P207
300	BARNEGAT LIGHTHOUSE, 1962	VOL 2 P160

APPROVAL SHEET

MI-10-2-75

OPR-517

The field work on this hydrographic survey was under my daily supervision.

The Boatsheet and records have been reviewed and approved by me.

A handwritten signature in black ink, reading "Ronald M. Buffington". The signature is written in a cursive style with a long horizontal stroke extending to the right.

Ronald M. Buffington  
Commander, NOAA  
Commanding

ATLANTIC MARINE CENTER  
APPROVAL SHEET  
FOR  
AUTOMATED SURVEY H- 9542

- 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 not been made. A new final sounding printout has/has not been made.

Date: Feb 26, 1976

Signed: William L 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: 26 Feb 1976

Signed: C. Dae Holtz

Title: Chief, Processing Division



10/16/75

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

Tide Station Used (NOAA Form 77-12): Atlantic City

Period: June 26 - August 10, 1975

HYDROGRAPHIC SHEET: H-9542

OPR: 517

Locality: Off the New Jersey coast in the vicinity of Atlantic City

Plane of reference (mean lower low water): 4:53 ft.

Height of Mean High Water above Plane of Reference: 4.1 ft.

Remarks: Recommended zoning:

	<u>Time</u> <u>Correction</u>	<u>Range</u> <u>Ratio</u>
1. West of $74^{\circ}00'$	- 5 min.	x0.98
2. $74^{\circ}00'$ - $73^{\circ}50'$	-10 min.	x0.93
3. East of $73^{\circ}50'$	-15 min.	x0.88

P.O. CHECKED BY BJS  
DATE 2-11-76  
VERIFICATION BR. AMC

James R. Hubbard  
for Chief, Tides Branch

H-9542

GEOGRAPHIC NAMES

Name on Survey	Source of Name									
	A ON CHART NO.	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RANDOM MCNALLY ATLAS	H U.S. LIGHT LIST	K	
ATLANTIC CITY	(Not shown on sheet - purpose of orientation)									1
ATLANTIC OCEAN										2
CAPE MAY	"	"	"	"	"	"	"	"	"	3
										4
										5
										6
										7
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										24
										25

Approved  
*Chas. E. Harrington*  
 Staff Geographer - 65182  
 9 June 1976

**HYDROGRAPHIC SURVEY STATISTICS**

HYDROGRAPHIC SURVEY NO. H-9542

(MI-40-2-75)

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET & 2-Overlays	1	BOAT SHEETS	1 ( <sup>3</sup> / <sub>3</sub> parts)
DESCRIPTIVE REPORT	1	OVERLAYS	3

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
Accordion ENVELOPES	1					1
CAHIERS	1 & P/O.		1			
VOLUMES	2					
BOXES			1			

T-SHEET PRINTS (List)  
No shoreline 1-Mylar Composite Sheet

SPECIAL REPORTS (List)  
None

**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				2266
POSITIONS CHECKED		200		
POSITIONS REVISED		7		
DEPTH SOUNDINGS REVISED		147		
DEPTH SOUNDINGS ERRONEOUSLY SPACED				
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED				

PROCESSING ACTIVITY	TIME (MANHOURS)			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
TOPOGRAPHIC DETAILS		0		
JUNCTIONS		8		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		10		
SPECIAL ADJUSTMENTS				
ALL OTHER WORK		128		
<b>TOTALS</b>		146	12	

PRE-VERIFICATION BY <u>W.H. Tyndall, R.G. Cram</u>	BEGINNING DATE <u>10/15/75</u>	ENDING DATE <u>12/22/75</u>
VERIFICATION BY <u>B.J. Stephenson</u>	BEGINNING DATE <u>02/04/76</u>	ENDING DATE <u>02/24/76</u>
REVIEW BY <u>HIT-AMC</u>	BEGINNING DATE <u>03/04/76</u>	ENDING DATE <u>03/04/76</u>

QC Eval: AK. Myers 11 hrs. 10/28/76  
U.S. G.P.O. 1972-769-562/439 REG.#6

HYDROGRAPHIC INSPECTION TEAM

ATLANTIC MARINE CENTER

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO.: H-9542

FIELD NO.: MI-40-2-75

GENERAL LOCALITY and SPECIFIC LOCATION

New Jersey, Offshore New Jersey East Coast, approximately 25 miles Southeast of Atlantic City

SURVEYED: June 26, 1975 through August 10, 1975

PROJECT NO.: OPR-517

SCALE: 1:40,000

SOUNDINGS BY: Ross Model 5000 Fineline Recorder, Serial Number 1052  
Ross 6000 Depth Digitizer

CONTROL: Electronic HI-FIX (Range-Range)  
Freq. 1799.6 KHz

Chief of Party ..... R.M. Buffington  
Surveyed by ..... R.E. Marriner, III  
Automated Plot by ..... Calcomp Plotter #618  
Verified and Inked by ..... B.J. Stephenson

1. Description of the Area

This survey covers an irregular <sup>butte</sup> ~~shaped~~ area southeast of Atlantic City, New Jersey. Survey limits are described by connecting the following corner points in a clockwise direction:

Latitude: 38° 52.0'N	Longitude: 74° 09.5'W
39° 22.0'N	74° 09.5'W
39° 22.0'N	73° 44.0'W
39° 52.0'N	73° 44.0'W

The predominantly sand and shell with traces of mud and pebbles bottom slopes moderately between eleven and twenty-eight fathoms.

2. Control and Shoreline  
Type-Source-Origin

The control is adequately described in Section F of the Descriptive Report.

This is an offshore survey, no shoreline is shown.

### 3. Hydrography

- A. Crossings: Depths at crossings are in good agreement.
- B. Depth Curves: The standard depth curve, 120 feet, was adequately delineated. The non-standard curve, ninety feet, and several 100 foot curves were added to the survey to better delineate the bottom configuration.
- C. Developments: The developments of the bottom configuration and the investigation of least depths are considered adequate.

### 4. Condition of the Survey

The sounding records, automated plotting and the Descriptive Report are adequate and conform to the requirements of the Provisional Hydrographic Manual, supplemented by the Atlantic Marine Center Manual.

### 5. Junctions

An adequate junction has been made with the following contemporary surveys:

H-9534 (1975) on the West  
 H-9552 (1975) on the North  
 H-9553 (1975) on the East

There are no contemporary surveys to the South.

### 6. Comparisons

- A. Prior Surveys: H-6271 (1937) 1:40,000  
 H-6219 (1937) 1:120,000  
 H-6264 (1937) 1:40,000  
 H-6345 (1938) 1:80,000  
 FE No. 5 (1951) WD

Taken together, these surveys comprise the prior coverage of the area of the present survey.

A comparison between the prior Hydrographic Surveys and the present Hydrographic Survey reveals only minor differences. Slight curve displacement and bottom configuration changes are evident. Such changes are considered to result from natural causes, and the more modern instruments utilized today.

- B. Wire Drag: FE No. 5 (1951) WD

The prior wire drag investigation only covered the two (2) wire drag items mentioned in the Pre-survey review, dated March 21, 1975, for the present survey; a 76 foot wire drag wreck on Chart 12318 (formerly C&GS 1217) in latitude 39° 00' 23"N, longitude 74° 05' 00"W and a seventeen

fathom wire drag sounding on Chart 12300 (formerly C&GS 1108) in latitude 39° 05' 00"N, longitude 73° 47' 00"W.

Neither item showed up on the fathograms when investigated. The Pre-survey review for soundings enclosed by triangles, only required further investigation if a trace of these items were found. The present survey did not prove or disprove either item, but since the prior wire drag investigation, FE No. 5, had previously recommended that the seventeen fathom sounding be deleted from the Chart, only the 76 foot wreck was carried forward from the wire drag investigation.  
*Charting is adequate with clearance of 17 fms.*

C. Published Chart #12300 (formerly C&GS 1108), 23rd edition, dated June 7, 1975 and #12318 (formerly C&GS 1217), 28th edition, dated October 4, 1975, ~~and #12214 (formerly C&GS 1219).~~

(a) Hydrography

The charted hydrography and the present survey reveals only minor differences, as previously discussed under prior surveys, and the Pre-survey review items discussed under prior wire drag surveys.

(b) Aids to Navigation

There are no aids to navigation in the area of the present survey.

7. Compliance with Instructions

This survey does comply with the Project Instructions.

8. Additional Field Work

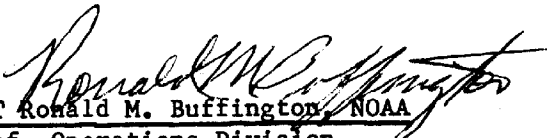
This is an excellent basic survey. Additional field work is not recommended.

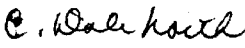
9. Hydrographic Inspection Team Comments

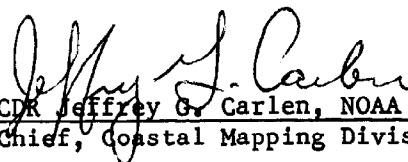
Hydrographic Inspection Team comments are included within this report and Verification deficiencies found, if any, have been corrected on the Smooth Sheet.


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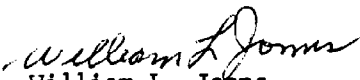
Examined and Approved:  
Hydrographic Inspection Team  
Date: 3/4/76

  
CAPT Ronald M. Buffington, NOAA  
Chief, Operations Division

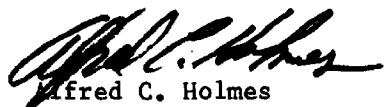
  
C. Dale North, Jr., LCDR, NOAA  
Chief, Processing Division

  
CDR Jeffrey G. Carlen, NOAA  
Chief, Coastal Mapping Division

  
Gregory R. Bass, LT, NOAA  
Chief, Electronic Data Branch

  
William L. Johns  
Chief, Verification Branch

Approved/Forwarded

  
Alfred C. Holmes  
RADM, NOAA  
Director, Atlantic Marine Center

REGISTRY NO. H-9542

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 REQUIRED \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

REGISTRY 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 REQUIRED \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

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H-9542

Item for Future Presurvey Reviews

The 76-foot wire-drag depth and submerged wreck at latitude 39°00.36', longitude 74°04.95' from FE No. 5 (1951) WD should be verified or disproved by future wire-drag investigations.

<u>Position Index</u>		<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat.</u>	<u>Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>
385	0735	1	3	50 years
390	0735	1	3	50 years
391	0735	1	3	50 years
385	0740	1	3	50 years
390	0740	1	3	50 years
391	0740	1	3	50 years
385	0741	1	3	50 years
390	0741	1	3	50 years
391	0741	1	3	50 years



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SURVEY  
Rockville, Md. 20852

C352

June 7, 1976

TO: *A. J. Patrick*  
A. J. Patrick  
Chief, Marine Surveys Division

THRU: Chief, Quality Control Branch

FROM: *G. K. Myers*  
G. K. Myers  
Quality Evaluator

SUBJECT: Quality Control Report H-9542 (1975), New Jersey, Off the  
East Coast, Cape May to Atlantic City

A quality control inspection of H-9542 has been accomplished to evaluate the accuracy and adequacy of the survey with respect to data acquisition, delineation of the bottom, determination of least depths and navigation hazards, decisions and actions by the verifier, and cartographic presentation of data.

Specific mention is made of the following deficiencies:

1. A comparison with H-6343 (1938) WD and FE No. 5 (1951) WD was completed during quality evaluation. No conflicts between present depths and effective wire-drag depths were found. The charted 76-foot wire-drag clearance depth and submerged wreck at latitude 39°00.36', longitude 74°04.95' from FE No. 5 (1951) WD were carried forward to supplement the present survey.
2. Comparisons with prior surveys and charts were completed during quality control evaluation. The present survey is adequate to supersede the prior surveys and the charted information in the common area.
3. No indication was found of a determination of the depth recorder instrumental correction by vertical cast comparisons. The amount of this correction is not known. However, the good agreement between prior and present depths would indicate the correction not to be large.

CC:  
C351



