

9574

Diag. Cht. No. 1000-3

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. WH-80-2-75
Office No. H-9574

LOCALITY

State NEW JERSEY
General Locality NEW YORK BIGHT
Locality VICINITY OF HUDSON CANYON

19 75

CHIEF OF PARTY
R. A. TRAUSCHKE

LIBRARY & ARCHIVES

DATE 10-21-76

9574

HYDROGRAPHIC TITLE SHEET

H-9574

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.

WH-80-2-75

State New Jersey

General locality New York Bight

Vicinity of

Locality A Hudson Canyon

Scale 1:80,000

Date of survey 8/25/75 - 9/23/75^{MCR}

Instructions dated March 27, 1975

Project No. OPR-517-WH-75

Vessel WHITING (2930)

Chief of party Cdr. Robert A. Trauschke

Surveyed by Cdr. Robert A. Trauschke, LCdr Theberge, Lt. Yeager, Lt(jg) Perrin, Lt(jg) Potok, Lt(jg) Bennett, Ens. Terry, Ens. Gofus

Soundings taken by echo sounder, ~~hand level, probe~~

Graphic record scaled by Ship's personnel

Graphic record checked by Ship's personnel ck by RGC

Protracted by N/A

Automated plot by AMC CalComp 618
~~WHITING System~~

Soundings penciled by AMC COM PLOT system

Soundings in fathoms ~~feet~~ at MLW ~~x 1.8~~

REMARKS: Time Meridian was 0°

Changes in red by LGC (AMC)

Applied to plots 1-24-77

RWH 9/10/76

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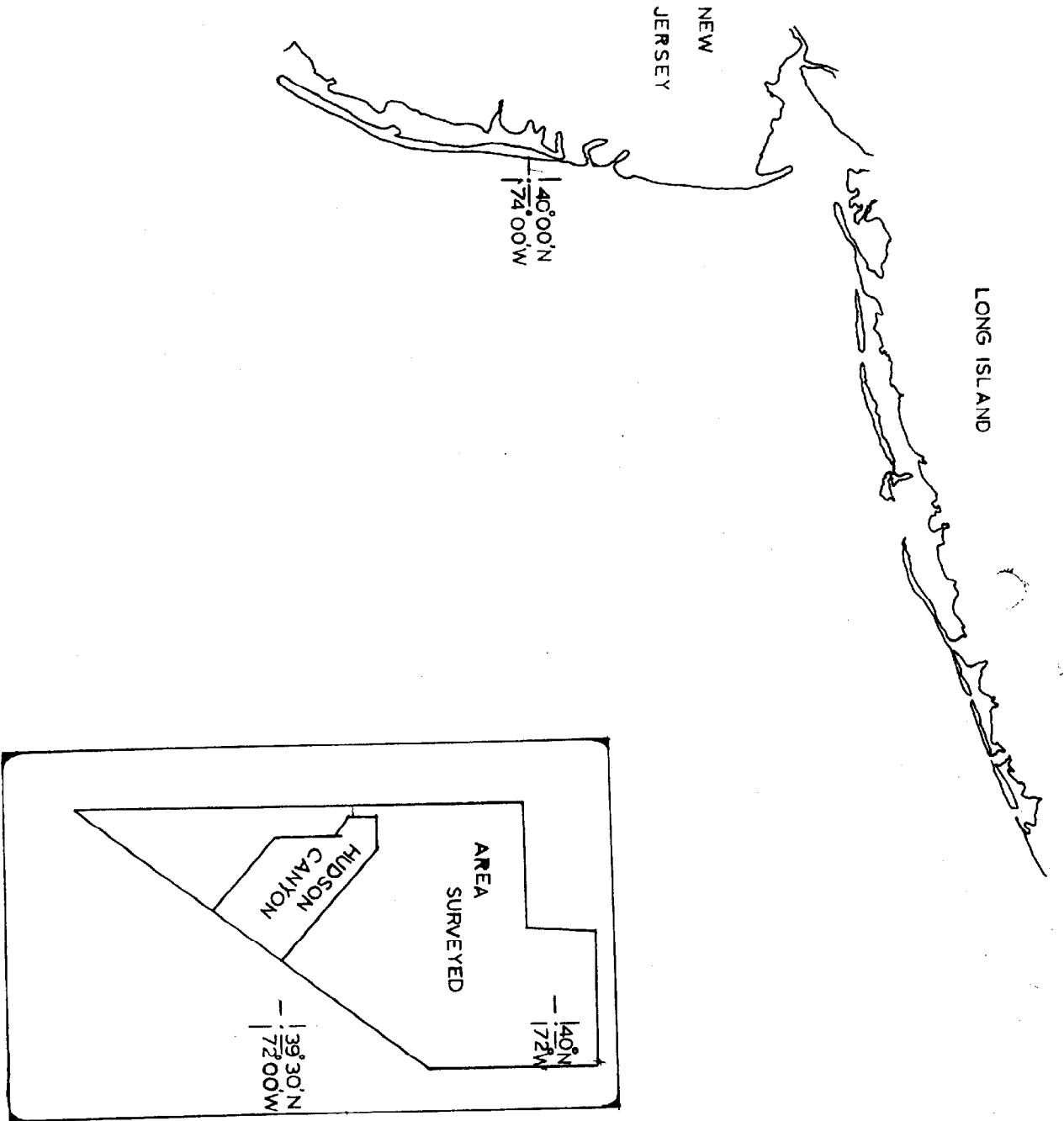


FIG. 1

WH-80-2-75

A. PROJECT

This survey was conducted in accordance with Project Instructions OPR-517-WH-75, Atlantic Seaboard Area Project, New York Bight Phase dated March 27, 1975. No amendments or supplemental instructions were issued during the field season.

B. AREA SURVEYED

The area covered in this survey is approximately 70 nautical miles from the New Jersey coast. The following points (refer to Figure 1) define the survey area:

- A) 39° 56' 30"N 72° 32' 30"W
- B) 39° 07' 45"N 72° 31' 45"W
- C) 39° 45' 48"N 71° 54' 00"W
- D) 40° 04' 06"N 71° 54' 00"W
- E) 40° 04' 06"N 72° 12' 42"W
- F) 39° 56' 48"N 72° 13' 18"W

The data for this survey was obtained from August 25, 1975 (Julian Day 237), August 28, 1975 (Julian Day 240) through September 1, 1975 (Julian Day 244), September 5, 1975 (Julian Day 248) and September 23, 1975 (Julian Day 266).

C. SOUNDING VESSEL

The NOAA Ship WHITING (2930) was the only sounding vessel used for this survey.

<u>VESSEL</u>	<u>POSITION NUMBERS USED</u>
WHITING (2930)	0001-2143

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The hydrography for Field Sheet WH-80-2-75 was conducted by the NOAA Ship WHITING (2930). For depths less than 130 fathoms the echo sounder used was a Ross Model 5000, 544, Serial Number 1055. For depths greater than 130 fathoms in the vicinity of the Hudson Canyon the echo sounder used was an EDO Deep Water Echo Sounder Model 185, Serial Number 169. The depths obtained with this instrument were recorded and scaled from a Raytheon Precision Depth Recorder. Instrument Initial was checked frequently by the operators. A value of 1.7 fathoms was used to account for the mean draft of the vessel. An additional 0.1 fathom was added on the TC/TI Tape to account for squat and settlement of the NOAA Ship WHITING. This value is applied for soundings taken at both standard and reduced speed since the change would amount to only 0.06% of the depths in the area.

Due to the fact that the NOAA Ship WHITING's oceanographic winch was inoperative, no Nansen cast was taken in the vicinity of the Hudson Canyon. A Nansen cast was obtained in the Northwest corner of the sheet to 70 meters by the NOAA Ship PEIRCE on 25 October 1975.

Velocity corrections have been tabulated to 90 meters, extension of the H-9557 correction graph below this depth would be invalid. Therefore historical correctors should be applied to those depths on this survey that exceed 50 fathoms. Tabulation of data from this Nansen cast is included in the appendix of this report under "Field Records for Determination of Corrections to Echo Soundings".

*Mr Mitchell
Vel. Correction
were used*

E. HYDROGRAPHIC SHEETS

The Field Sheets were prepared by the WHITING's personnel using the ship's plotting equipment. The survey area was divided at 72° 15' 00"W to form two plotter sheets: WH-80-2W-75 and WH-80-2E-75; in addition to these two plotter sheets, the development of the Hudson Canyon was plotted on a 1:40,000 scale on a separate sheet which was bounded by the following points:

39° 41' 48"N, 72° 30' 00"W; 39° 38' 30"N, 72° 30' 18"W; 39° 36' 36"N, 72° 27' 15"W;
39° 30' 00"N, 72° 27' 15"W; 39° 22' 06"N, 72° 16' 12"W; 39° 28' 48"N, 72° 08' 48"W;
39° 41' 48"N, 72° 55' 00"W.

In order to fit the entire Hudson Canyon area on one 22 inch plotter sheet, the 1:40,000 enlargement of this area is plotted skewed; the skew conforms to the axis of the canyon.

F. CONTROL STATIONS

The method of control of the NOAA Ship WHITING (2930) was Range-range using RAYDIST. The stations used for Field Sheet WH-80-2-75 were:

<u>STATION</u>	<u>ELECTRONIC CONTROL</u>	<u>LOCATION</u>	<u>LATITUDE(North)</u>	<u>LONGITUDE (West)</u>
BEN 1974	132	Rockaway Inlet	40° 34' 58.430"	73° 52' 45.107"
TIANA 1974	133	Shinnecock Inlet	40° 50' 13.970"	72° 29' 40.176"

All data obtained was controlled utilizing this station pair. The stations were located by Mr. Jim Shea of the Atlantic Marine Center, Operations Division. Stations were located using at least third order methods.

G. HYDROGRAPHIC POSITION CONTROL

The Ship WHITING ran main scheme hydrography in range-range operation on courses 000^o and 180^o. Crosslines were run on various courses. Corrections to RAYDIST readings were obtained via calibrations at the start and conclusion of each trip. Three point sextant fixes with a check angle were used for obtaining calibrations and partial correctors. A temporary buoy was established and used to verify the whole lane count periodically and after losses or gains due to weather. The electronic control stations used by the ship WHITING for this survey were being shared by the NOAA Ship PEIRCE and the signal was considerably weakened when the PEIRCE was working in the vicinity of the stations using high power. The difficulty was resolved by requesting the PEIRCE to shift to low power and by coordinating our working schedules so that the PEIRCE was not in the vicinity of the shore stations when we were well offshore.

Strip chart records were kept up and properly annotated to verify lane counts.

H. SHORELINE

The survey area for WH-80-2-75 contained no shoreline.

I. CROSSLINES

Crosslines accounted for 6.4% of the hydrography. Crosslines began one hour before mean low water and continued until one hour after mean low water based on predicted tides as per the Project Instructions. Agreement between the crosslines and main scheme hydrography was excellent except in the area of the Hudson Canyon where the steep gradient of the bottom makes comparison of crosslines difficult.

J. JUNCTIONS

The sheet WH-80-2-75 ^{H-9574} junctioned with the following contemporary surveys:
PE-80-2-75 - H-9555
WH-80-1-75 H-9548
MI-80-1-75 H-9553
PE-80-1-75 H-9557
MI-80-2-75 H-9557

Soundings on this survey were consistently one (1) fathom shoaler than those of PE-80-1-75, no explanation of this is attempted here, but it should be noted that the NOAA Ship Mt. MITCHELL had the same difficulty with PEIRCE soundings in some areas. Soundings on this survey were in excellent agreement with those of MI-80-1-75. Since WH-80-1-75 was also a contemporary WHITING survey, no overlap was required but agreement of the depth curves from sheet to sheet was very good.

K. COMPARISONS WITH PRIOR SURVEYS

There were no pre-survey review items on this survey. This survey was compared with survey H-6192 which was conducted in 1936 on a scale of 1:120,000. There was good agreement between the two sheets, although this survey was consistently one to two fathoms shoaler than the prior survey. This may be due to the lack of a velocity correction which was not available when this sheet was plotted. There were two conspicuous discrepancies in comparison at 39° 40' North, 72° 02' West. This survey was seven (7) fathoms shoaler (90 fathoms vs. 97 fathoms) and at 39° 32' North, 72° 10' West this survey was six fathoms shoaler (100 fathoms vs. 106 fathoms). However both of these comparisons were in areas of steep gradients and the difference in scales between the surveys result in sufficient inaccuracies to account for the differences in depth.

L. COMPARISONS WITH THE CHART

The largest scale chart of this area available is N.O. 12300, "Approaches to New York, Nantucket Shoals to Five Fathom Bank", at a scale of 1:400,000. In general there was good agreement between the survey and the chart. In depths less than 50 fathoms the survey's depths were generally one fathom shoaler although there were several comparisons in random locations throughout the survey where this survey's depths were one fathom deeper. In water deeper than 50 fathoms, this survey's depths were consistently one to two fathoms shoaler than the chart. This situation is probably due to the lack of velocity corrections on this survey's data and the agreement should improve when the velocity correctors are applied on the smooth sheet.

M. ADEQUACY OF THE SURVEY

This survey is sufficiently complete and adequate to warrant its use to supersede prior surveys for charting.

N. AIDS TO NAVIGATION

There were no aids to navigation in the area covered by this survey.

O. STATISTICS

All hydrography on this survey was accomplished by the NOAA Ship WHITING (2930). The summary of statistics are as follows:

<u>Total Number of Positions</u>	<u>Nautical Miles of Sounding Line</u>	<u>Sq. Miles of 1</u>
2143	2901	716

P. MISCELLANEOUS

The area of the Hudson Canyon was developed by the NOAA Ship WHITING. Lines of hydrography were run in between the regular main scheme lines, resulting in a line spacing of approximately 360 meters in the area developed.

The ship WHITING had much success using a short scope buoy for whole-lane verification. These verifications were later proved valid by three-point sextant fixes. Location of the buoy and its tender buoy was facilitated with radar reflectors, and the WHITING had little trouble finding buoys even in moderate seas.

Q. RECOMMENDATIONS

This survey is complete and adequate and the hydrographer recommends that it supersede all prior surveys for charting this area.

R. AUTOMATED DATA PROCESSING

Data gathered by the WHITING on this survey was acquired using RK 111 "Range-range Real Time Plot", version 7 August 1974. Data was plotted using RK 211 "Range-range Non-real Time Plot."

Field Sheets for WH-80-2-75 were drawn using RK 201 "Grid and Lattice Plot" version 19 February 1975.

S. REFERENCES TO REPORTS

None

GEOGRAPHIC NAMES

H-9574

Name on Survey

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 RAND McNALLY ATLAS
H U.S. LIGHT LIST
K

HENDRICKSON CANYON

HUDSON CANYON

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APPROVED

Chas. B. Harrington

STAFF GEOGRAPHER - C51X2

9 Nov 1976

2/24/76

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: August 25 - September 23, 1975

HYDROGRAPHIC SHEET: H-9574

OPR: 517

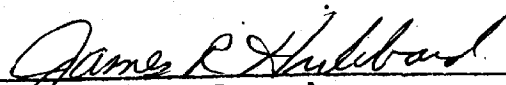
Locality: New York Bight

Plane of reference (mean ~~lower~~ low water): 4.53 ft.

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

Remarks: Recommended zoning:

Apply a -30 min. time correction and range ratio x0.73.


Chief, Tides Branch

4. ABSTRACT OF CORRECTIONS
TO ECHO SOUNDINGS

150 This Vel. for H-9574

VELOCITY TAPE LISTING

H-9557
(MI-80-2-75)

000020 0 0001 0001 001 222000 009557
 000055 0 0002
 000080 0 0003
 000120 0 0004
 000160 0 0005
 000205 0 0006
 000300 0 0008
 000390 0 0010
 000460 0 0012
 000510 0 0014
 000570 0 0016
 000640 0 0018
 000725 0 0020
 000805 0 0022
 000900 0 0024
 000980 0 0026
 001065 0 0028
 001160 0 0030
 001460 0 0040
 002125 0 0050
 002930 0 0060
 003720 0 0070
 004500 0 0080
 999999 0 0090

NOTE:

O.K.

This velocity table
 was taken from Survey
 H-9557 (MI-80-2-75)
 The nansen cast for
 This table was taken
 on 16 September 1975,
 during the same period of
 this survey H-9574 (WH-80-2-75)

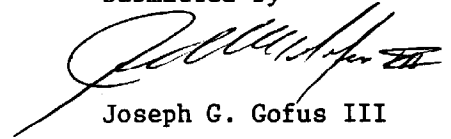
6. LIST OF STATIONS

130	0	39	39	26286	074	15	47098	139	HULGATE, WATERTANK
131	0	39	33	46764	074	14	31479	139	BEACH HAVEN, WATERTANK
132	0	39	35	10198	074	13	29143	139	LONG BEACH WATERTANK, STANDPIPE
133	0	39	37	24578	074	11	50235	139	BRANT BEACH, WATERTANK
134	0	39	39	49041	074	09	55912	139	SURF CITY, STANDPIPE
135	0	39	41	25500	074	08	37090	139	HARVEY CEDARS, C.G., COPULA
136	0	39	42	27724	074	08	05856	139	HIGH POINT, STANDPIPE
137	0	39	45	24355	074	06	31927	139	^A BORNEGAT LIGHT, NEW TANK
138	0	39	45	46162	074	15	47098	139	^B BORNEGAT LIGHT, #3
139	0	39	45	51179	074	06	23919	139	^A BORNEGAT LIGHTHOUSE
110	0	39	54	22000	074	04	57765	139	SEASIDE PARK SHORE, WATER CO.
111	0	39	56	06577	074	04	43169	139	SEASIDE PARK, NEW WATER TANK
112	0	39	56	36957	074	04	44488	139	SEASIDE HEIGHTS, WATERTANK
113	0	39	58	07114	074	04	18747	139	LAVALLETTE, STANDPIPE
114	0	39	59	53370	074	03	46974	139	NORMANDY BEACH, WATERTANK
115	0	40	04	06637	074	02	44160	139	BAYHEAD WATERTANK
116	0	40	05	09760	074	02	49974	139	PT. PLEASANT, MUNICIPAL TR. AREA
117	0	40	07	13267	074	03	27386	139	MANASQUAM, STANDPIPE
118	0	40	08	11500	074	01	40397	139	SEA GIRL, LIGHTHOUSE
119	0	40	08	48343	074	01	29390	139	SPRING LAKE, FLAGPOLE
120	0	40	10	38795	074	01	46694	139	BELMAR, BLACK STANDPIPE
121	0	40	11	37193	074	01	21295	139	AVON, WATERTANK
122	0	40	12	06249	074	01	15631	139	BELMAR, SILVER TANK
123	0	40	13	30340	073	59	59663	139	ASBURY PARK, FLAGPOLE
124	0	40	14	05620	074	00	30810	139	ALLENHURST, STANDPIPE
125	0	40	15	23412	074	00	11586	139	DEAL STACK

126	0	40	18	29025	073	59	04371	139	LONG BEACH CONCRETE STACK
127	0	40	18	38280	073	58	51310	139	LONG BRANCH, TANK
128	0	40	20	32350	073	58	29956	139	MONMOUTH C.G. RADIO TOWER
129	0	40	35	05191	073	38	12366	139	LIDO EAST TWIN TOWER
130	0	40	35	46814	073	30	30627	139	JONES BEACH TOWER
131	0	40	37	56443	073	13	08442	139	FIRE ISLAND LIGHTHOUSE
132	0	40	34	58430	073	52	45107	250	BEN RAYDIST
133	0	40	50	13970	073	29	40176	250	TIANA RAYDIST
134	0	30	32	51112	074	15	12847	250	HAVEN RAYDIST
135	0	40	27	34385	073	59	41012	250	SANDY HOOK RAYDIST
136	0	40	27	41798	074	00	08811	139	SANDY HOOK
137	0	40	23	47250	073	59	10544	139	NAVISINK (N)
138	0	40	23	45240	073	59	09203	139	NAVISINK (S)

APPROVAL SHEET

Submitted by



Joseph G. Gofus III

ENS. NOAA

Supervision of field and office work on this hydrographic survey was continuous on a day to day basis to insure completeness of the survey and that all work was done in accordance with the Project Instructions.

APPROVED/FORWARDED



Robert A. Trauschke, Cdr. NOAA
Commanding Officer, NOAA Ship WHITING

ATLANTIC MARINE CENTER
APPROVAL SHEET
FOR
AUTOMATED SURVEY H-9547

- 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: 17 June 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: 8/27/70

Signed: C. Douglas North Jr

FOR C. DALE NORTH JR

Title: Chief, Processing Division

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. 9574

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET & PNO, 2 excess ovly.	1	BOAT SHEETS (3 parts) & 2 ovlys.	1
DESCRIPTIVE REPORT	1	OVERLAYS (preliminary)	2

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES	1 with printouts					
CAHIERS	1- with printouts					
VOLUMES	2					
BOXES			1-final printout, PDR's & 1-sawtooth rec. & sndg. vol.		1 envel. misc. data	

T-SHEET PRINTS (List)

SPECIAL REPORTS (List)

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				2143
POSITIONS CHECKED		125		
POSITIONS REVISED		0		
DEPTH SOUNDINGS REVISED		50		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		0		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		0		
JUNCTIONS		8		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		16		
SPECIAL ADJUSTMENTS		0		
ALL OTHER WORK		110		
TOTALS		134	HIT - 5 hrs	
PRE-VERIFICATION BY - QUALITY CONTROL BY <i>J. W. Wellman</i>	32 hrs.	BEGINNING DATE 11-02-76	ENDING DATE 11-9-76	
VERIFICATION BY <i>R.G. Cram & R. Roberson</i>		BEGINNING DATE 3/15/76	ENDING DATE 8/17/76	
REVIEW BY <i>HIT</i>		BEGINNING DATE 8/13/76	ENDING DATE 10/13/76	

J. W. Wellman

8 hrs

10-14-76

10-15-76

2. Baumgardner 8 hrs 1-4-77

REGISTRY NO. H-9574

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. H-9574

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:

H-9574

Items for Future Presurvey Reviews

None

HYDROGRAPHIC INSPECTION TEAM

ATLANTIC MARINE CENTER

HYDROGRAPHIC SURVEY REVIEW

DATE:

REGISTRY NO.: H-9574

FIELD NO.: WH-80-2-75

GENERAL LOCALITY and SPECIFIC LOCATION:

Atlantic Ocean, New York Bight, Hudson Canyon

SURVEYED: August 25, 1975 through September 23, 1975

PROJECT NO.: OPR-517

SCALE: 1:80,000

SOUNDINGS BY: Ross Fathometer
Model 5,000 s/n 1055
EDO Deep Water Echo Sounder
Model 185 s/n 169

CONTROL: Raydist
(Range-Range)
3296.400 KHz

Chief of Party CDR R.A. Trauschke
Surveyed by LCDR A.E. Theberge
..... LT D.W. Yeager
..... LTJG A.L. Potok
..... LTJG K.W. Perrin
..... LTJG J.H. Bennett
..... ENS D.L. Terry
..... ENS J.G. Gofus
Automated Plot by Calcomp Plotter #618 (AMC)
Verified and Inked by R.G. Roberson

1. Description of the Area

The area surveyed is approximately 70 miles east of the New Jersey coast and is bounded by the following points:

Latitude: 39° 56' 30"N	Longitude: 72° 32' 30"W
39° 07' 45"N	72° 31' 45"W
39° 45' 48"N	71° 54' 00"W
40° 04' 06"N	71° 54' 00"W
40° 04' 06"N	72° 12' 42"W
39° 56' 48"N	72° 13' 18"W

The bottom slopes gently until reaching the 100 fathom curve where the bottom slopes steeply to much greater depths. In the vicinity of the Hudson Canyon the bottom drops quickly to depths of approximately 600 fathoms. The bottom composition is mud, sand, and broken shells.

2. Control and Shoreline

There is no shoreline within the survey area. The survey was controlled using Raydist operated in the Range-Range mode at a frequency of 3296.400 kHz. Control stations were located at the following positions:

Ben Sea-Fix, 1975	Tiana Sea-Fix, 1975
40° 34' 58.430"	40° 50' 13.970"
73° 52' 45.107"	72° 29' 40.176"

3. Hydrography

A. Crossings: Crosslines comprised 6.4% of all hydrography run. Agreement was good (one fathom differences) except in the area of the Hudson Canyon where steep slopes make crossline comparisons difficult. Crosslines were run at predicted low water.

B. Depth Curves: Depths ranged from approximately thirty fathoms to over 600 fathoms. Only the standard depth curves were used for contouring the bottom.

C. Low-water Line: None

D. Developments: The single development that was run was of the Hudson Canyon and is adequate to show the topography of the canyon.

E. Velocity Corrections: There was no Nansen Cast in the deep water of the Hudson Canyon by the Ship WHITING and therefore there were no velocity corrections to cover deep^{PHS} after 50 fathoms. The MT. MITCHELL did take Nansen Casts to cover the deep water area on sheet H-9557. This velocity curve was used for this survey.

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

This sheet joins five other sheets: H-9532 (1975) to the north, H-9548 (1975) to the northwest, H-9553 (1975) to the southwest, H-9557 (1975) to the east, and H-9555 (1975) to the north. Junctions were in excellent agreement.

6. Comparisons

A. Prior Surveys: H-6192 (1936), 1:20,000 - Comparison between the surveys shows little appreciable change in bottom topography. The new survey was consistently shoaler, but this may have been a result of types of equipment or velocity correctors. In the Hudson Canyon area differences are greater, the differences may be attributed to the steep canyon walls and the modern technology. The present survey is adequate for charting in the common area. (See Q.C. Report-items 1 and 2)

B. Contemporary Surveys: None

C. Wire Drag Surveys: None

D. Published Chart: #12300 (formerly C&GS 1108), 23rd edition, dated June 7, 1975.

(a) Hydrography: Agreement between the chart and survey is good. No trace of the sunken wreck at $39^{\circ} 15.5'$, $72^{\circ} 30.0'$ was found. Recommend it be retained as charted. (See Q.C. Report-item 3)

(b) Aids to Navigation: None

7. Compliance With Instructions

This survey complies with Project Instructions. Bottom samples for this project were taken by the NOAA Ship GEORGE B. KELEZ and are insufficient. At the time of completion of this sheet at AMG the bottom sampling by the KELEZ had not been completed. (See Q.C. Report-item 1)

There is nothing in the Descriptive Report to indicate that a calibration was taken on day 244, to close out the trip. After considerable effort it has been determined that a calibration was made on day 245, and included in the records of sheet H-9547 (WH-40-2-75). All calibrations should be included in the Descriptive Report that apply to a survey.

8. Additional Field Work

This is a good basic survey. Additional field work is not recommended.


9. Hydrographic Inspection Team Comments

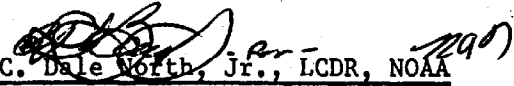
Hydrographic Inspection Team comments are included within this report and Verification deficiencies found, if any, have been corrected on the Smooth Sheet.


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

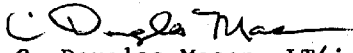
H-9574

Examined and Approved:
Hydrographic Inspection Team
Date: August 13, 1976


CAPT Ronald M. Buffington, NOAA
Chief, Operations Division

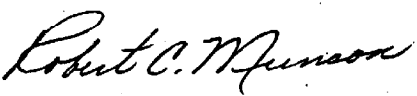

C. Dale North, Jr., LCDR, NOAA
Chief, Processing Division


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C. Douglas Mason, LT(jg), NOAA
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RADM, NOAA
Director, Atlantic Marine Center



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

C352

November 9, 1976

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

THRU: Chief, Quality Control Branch

FROM: K. W. Wellman *K. W. Wellman*
Quality Evaluator

SUBJECT: Quality Control Report for H-9574 (1975), New Jersey, New York Bight, Vicinity of Hudson Canyon

A quality control inspection of H-9574 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 navigational hazards, junctions, decisions and actions by the verifier, and cartographic presentation of data.

Junctional sheets H-9532 (1975) and H-9557 (1975) are not presently available for examination of the junctional adequacy.

In general the present survey was found to conform with National Ocean Survey standards and requirements except as follows:

1. Section 6A of the Review Report is considered incomplete inasmuch as no comparison with prior survey was discussed covering the northern third of the survey and inaccurately states that the new survey is consistently shoaler than the prior survey. Furthermore, it does not contain a statement that the prior survey is superseded. (See provisional manual - section 6.6(11).) Section 6A of the Review Report should state the following:

Comparison with Prior Surveys

H-6192	(1936)	1:120,000
H-6347	(1938)	1:120,000

These prior surveys cover the area of the present survey.

A comparison between the present and prior surveys reveals present depths generally 0 to 2 fathoms deeper over most of the area in depths less than



100 fathoms. A few apparent greater differences of as much as 20 fathoms are noted in the vicinity of the steeply sloping sides of the Hudson Canyon. The noted depth differences are attributed to the less detailed and less accurate methods employed on the prior surveys.

A few bottom characteristics were carried forward to supplement the present survey. With these additions the larger scale and more completely developed present survey is adequate to supersede the prior surveys within the common area.

2. The statement regarding supersession of prior surveys, contained in section 10 of the Review Report, would be more appropriate in section 6A of the Review Report where the surveys being considered (only the most recent prior surveys) are listed.

3. The following comments supplement section 6D(a) of the Review Report:

The charted hydrography originates with the previously discussed prior surveys which require no further consideration supplemented by the U.S. Navy Wreck List, a chart letter, and a notice to mariners.

Attention is directed to the following:

(1) The two nondangerous wrecks charted in latitude $39^{\circ}15.50'$, longitude $72^{\circ}30.00'$ and latitude $39^{\circ}50.00'$, longitude $72^{\circ}10.50'$ originate with the U.S. Navy Wreck List. They are not disproved by the present survey and should be retained on the chart.

(2) The unexploded depth charges charted in the vicinity of latitude $39^{\circ}37.00'$, longitude $72^{\circ}26.00'$ originate with L 1186 (1961). They are not disproved by the present survey and should be retained on the chart.

(3) The unexploded ordnance PA charted in latitude $39^{\circ}38.00'$, longitude $72^{\circ}05.70'$ originates with NM 26/70. It is not disproved by the present survey and should be retained on the chart.

Except as noted above, the present survey is adequate to supersede the charted hydrography within the common area. (See provisional manual - section 6.6(12a).)

4. The verifier failed to forward the chart utilized in the chart comparison. (See provisional manual - section 8.3(12).)

cc:
C351

