

9531

Diag. Cht. Nos. 1000-3, 1215-3 & 1216-2.

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 40-2-75
Office No. H-9531

LOCALITY

State NEW JERSEY
General Locality NEW YORK BIGHT
Locality OFF ASBURY PARK

19 75

CHIEF OF PARTY

J. W. Dropp

LIBRARY & ARCHIVES

DATE 11/8/76

9531

HYDROGRAPHIC TITLE SHEET

H-9531

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 40-2-75

State New JerseyGeneral locality New York BightLocality Off Asbury
Highland ParkScale 1:40,000 Date of survey 3 May 1975 - 19 June 1975Instructions dated 27 March 1975 Project No. OPR 517-PE-75Vessel NOAA Ship PEIRCE (CSS-28)Chief of party Commander Joseph W. Dropp, NOAA
CDR J. W. Dropp, LT D. L. Suloff, LT G. W. Jamerson, LTJG K. M. Holden,
Surveyed by LTJG B. B. Johnson, ENS D. A. Dreves, ENS K. W. SantarelliSoundings taken by echo sounder, ~~hydrographic~~ Ross Model 200-A, S/N C537-1039-SGraphic record scaled by Ship's CrewGraphic record checked by Ship's Officers and Survey personnel RGR AMC
CALCOMP-618 AMC
Protracted by AMC Hydroplot System Automated plot by NOAA Ship PEIRCE (CSS-28)Verification by R.G. Roberson - AMCSoundings in feet at MLW XXXXREMARKS: All times are Greenwich Mean Time - All notes in red by verifierApplied to stht 1-24-77
altXWW 5/23/91

TABLE OF CONTENTS

	Page
Hydrographic Title Sheet	
Report Text	
A. Project	1
B. Area Surveyed	1
C. Sounding Vessel	1
D. Sounding Equipment	1
E. Hydrographic Sheets	1
F. Control	1
G. Hydrographic Position Control	2
H. Shoreline	2
I. Crosslines	2
J. Junctions	2
K. Comparison with Prior Surveys	2&3
L. Comparison with Chart	3&4
M. Adequacy of Survey	4
N. Aids to Navigation	4
O. Statistics	4
P. Miscellaneous	4&5
Q. Recommendations	5
R. Automated Data Processing	5

	Page
S. References to Reports	
Tide Note	6
Tide Correspondence	7
Times of Hydrographic Operations	8
Electronic Control Report	9 thru 21 13
✓ Daily Lane Count Abstract	12&13
Triangulation Station Recovery Notes	14 thru 16
Corrections to Echo Soundings Report	17&18
✓ TC/TI Tape Printout	19
Velocity Tape Printout	20
Abstract of Draft	21
✓ TRA Corrections Abstract	22 thru 24
✓ Position Data Sheets	25&26
Assignment of Registry Number	27
✓ Projection Parameters	28
Approval Sheet	29
✓ Oceanographic Log Sheet M	
✓ Items filed in the cahier with the field records	

H

Descriptive Report
to accompany
Hydrographic Survey PE 40-2-75
Registry No. H-9531

OPR 517-PE-75
New York Bight
1975 Field Season

NOAA Ship PEIRCE (CSS-28)

Joseph W. Dropp
Commander, NOAA
Chief of Party

A. Project

This survey is a part of the Atlantic Seaboard Area Project, New York Bight phase. It was performed according to Project Instructions OPR 517-PE-75, dated 27 March 1975.

B. Area Surveyed

PE 40-2-75 includes the area eastward of the New Jersey coast roughly between Long Branch and Manasquan Inlet. It is more accurately defined by lines connecting the following positions:

From	Lat 40°20.00'N ✓	Long 73°52.31'W ✓
To	Lat 40°09.69'N ✓	Long 73°52.15'W ✓
	Lat 40°06.00'N ✓	Long 73°53.22'W ✓
	Lat 40°06.00'N ✓	Long 73°40.00'W ✓
	Lat 40°19.80'N ✓	Long 73°40.00'W ✓
	Lat 40°20.00'N ✓	Long 73°52.31'W ✓

Hydrographic operations began on 3 May 1975 and were completed on 17 May 1975. ✓

C. Sounding Vessel

All soundings were obtained by the PEIRCE (CSS-28), Vesno 2830. Position numbers 0001 to 1373 were used. ✓

D. Sounding Equipment

All soundings were taken with a Ross fathometer, Model 5000D, Serial No. C 537-1039-5. Depths ranged from 61 feet to 226 feet. The fathometer was maintained at zero initial, and phase checks were routinely performed on it. A separate Corrections to Echo Soundings report is attached hereto.

E. Hydrographic Sheets

Field sheets were prepared aboard the PEIRCE by the ship's PDP-8E computer and complot roll bed plotter. The smooth sheet will be computer plotted by the Atlantic Marine Center.

F. Control

See included Electronic Control Report.

G. Hydrographic Position Control

See included Electronic Control Report

H. Shoreline

No shoreline is shown on this sheet.

I. Crosslines

9 1/2 %

Crosslines accounted for approximately 9.51% of all hydrography. Soundings on crosslines were in excellent agreement with those observed in the main scheme.

J. Junctions

This survey junctions on its western edge with survey H-6190, 1:40,000 1936, and on its northern edge by Army Corps of Engineers Survey, BP 88380-88381, 1:20,000, 1973. Comparison of soundings at the junctions was good, generally within 1 to 3 feet. A discrepancy of 18 feet exists however, where H-9531 junctions with the Corps of Engineers survey at Lat 40° 20' , Long 73° 47' . The area was developed by the PEIRCE to resolve the discrepancy and to produce a satisfactory junction with the Corps of Engineers survey. A satisfactory junction was finally achieved. The development showed the PEIRCE's soundings to be correct throughout the area in question. It appears that several soundings in the Corps of Engineers survey at this point of the junction are in error.

The 54' shoal area indicated on the 1936 survey did not appear in the present survey though only a very small portion of it fell with the survey limits. Differences between junction and observed soundings are probably caused by using predicted tides vice actual tides, and that TC/TI correctors have not yet been applied.

Junctions with H-9546 (1975) on the south and H-9547 (1975) on the east.

K. Comparison with Prior Surveys

Observed soundings compared well with those recorded on survey ^H H-6190, 1:40,000, 1936. Discrepancies varied from 1 to 3 feet and probably resulted from using predicted vice actual tides, and not yet applying TC/TI correctors to soundings. There were three pre-survey items in the survey area.

PSR Item #6

Lat 40°13.7'N Long 73°50.2'W

A sunken wreck with least depth of 45'. The area was developed by

running north-south and east-west sounding lines over the charted location. A spike appeared on the fathogram approximately 0.35 miles WNW of the charted location. Divers investigated and found ~~least depth~~ an intact wreck at Lat 40°13.82'N, Long 73°50.65'W. A leadline ~~depth~~ least depth of 62' was observed on day 137 at time 2030Z.
Pos'n 126703 fath sgm of 58.0 ft Leadline depth less 3.4 Tide = 58.6 ft
Recommendation: It is recommended that the charted position of the wreck be changed to that observed by the PEIRCE.

PSR Item #7

Lat 40°15.93'N Long 73°47.53'W

Sunken wreck (1943). Reported destroyed. The area was developed by running north-south and east-west sounding lines at 100 meter spacing. No indication of the wreckage appeared on the fathogram.

Recommendation: Leave as charted.

PSR #11

Lat 40°06.50'N Long 73°40.36'W

Sunken wreck. Position approximate. The area was developed by running sounding lines at 50 meter spacing. The wreck was possibly found at Lat 40°12.2'N, Long 73°41.3'W where a 13' spike was observed. This spike however, was not a very strong indication of wreckage, and no further indication of it was found.

Recommendation: Leave as charted until wire drag of the area can be performed.

L. Comparison with Chart

The results of this survey were compared with charted information appearing on chart 12326 (C&GS 1215) and 12323 (C&GS 1216) and fathograms were inspected for indications of the following charted wrecks, none of which were found:

- | | | |
|----|---------------|----------------|
| 1. | Lat 40°10.4'N | Long 73°41.0'W |
| 2. | 40°13.4'N | 73°40.7'W |
| 3. | 40°13.0'N | 73°44.5'W |
| 4. | 40°15.0'N | 73°45.0'W |
| 5. | 40°12.5'N | 73°46.0'W |

L. Comparison With Chart (Cont'd)

The charted positions of these wrecks lay between the regular sounding lines and indications of them were not observed. However, since the regular sounding lines were 400 meters apart, it is quite possible that remains of these wrecks may exist and have gone undetected. Should positive determination of the presence or absence of them be desired, it is recommended that the area be wire dragged, as shipboard hydrography leaves many areas of the ocean bottom unexamined. Until a wire drag is performed, it is recommended that the wrecks remain as charted.

M. Adequacy of Survey

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

N. Aids to Navigation*

^{One} ~~No~~ aid^{is} to navigation ~~were~~ located in the survey area.
Whis "BA" at posn. 1374 Lat. $40^{\circ}20'07''$ Long $73^{\circ}47'07.00''$ located

O. Statistics in Sounding Volume.

Total number of positions	1286 ⁷
Total miles of hydrography	752.4
Total crosslines miles	70.8
Total miles of developments	74.4
Total square miles	132.2
Bottom Samples	6

Two oceanographic stations were observed.

P. Miscellaneous

Fathograms were scanned throughout the survey while on line and when reviewed by the ship's survey department. Errors were corrected and inserts made of significant soundings.

The wrecks at PSR Items 7 and 11 did not appear on the fathograms in spite of developing these areas in search of traces of the wreckage. Wire drag of these areas appears to be the only positive means of proving their existence and location. Three spikes appeared on fathograms which do not appear on the present chart. Due to the depth of water, they were not investigated by divers to determine their cause. However, they were developed to determine their extent. They are as follows: ^{Possible wrecks}

* Aids to Navigation

The lane values for this buoy were found in the Sounding Volume (Ops. Log) with H-9532, day 149 at 012200Z. The B.P. was taken while enroute working grounds after a calibration. The correct position is as follows: $\phi = 40^{\circ}20'44.22''$, $\lambda = 73^{\circ}47'44.69''$.
R.G.R.

1. Lat 40°12'13.48" N Long 73°41'18.88"W

Found in 100 feet of water. Least depth observed on fathogram - 91 feet. 97' plotted, Day 133 Time 07+930, regular line. (development on Day 136, pos. 1222 thru 1232)

2. Lat 40°13'55.65"N Long 73°46'05.84"W

Found in 200 feet of water. Least depth observed on fathogram - 162 feet. 173' plotted. Day 137 time 152918.

3. Lat 40°13'37.29"N Long 73°47'58.30"W

Found in 90 feet of water. Least depth observed on fathogram - 81 feet. *At 157, 137 Time 170055.*
pas. 1346 +

It is suspected that these are the remains of sunken vessels, but there is no sure evidence to support this suspicion.

Q. Recommendations

This survey may be considered adequate to supersede prior surveys for charting purposes.

R. Automated Data Processing

All soundings were obtained while using on-line programs RK 110 dated 7 August 1974 and RK 111 dated 7 August 1974. RK 110 (hyperbolic mode) was used for position numbers 0001 through 0478. RK 111 (Range-Range mode) was used for positions 0543 through 1351. (Positions 0479 through 0542 were omitted).^{1, 2, 3, 4} The smooth plot was performed using RK 210 dated 16 August 1974 and RK 211 dated 16 August 1974.

S. References to Reports

See following reports

Respectfully \submitted,

Donald G. Drews

Donald A. Dreves
Ensign, NOAA

August 13, 1975

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: May 3-17, 1975

HYDROGRAPHIC SHEET: H-9531

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 is 4.4 ft.

Remarks: Recommended zoning:

Apply range ratio x 1.07 to hourly heights.

for James R. Hubbard
Chief, Tides Branch

Times of Hydrographic Operations

<u>Date</u>	<u>JD</u>	<u>Time From (GMT)</u>	<u>Time To (GMT)</u>
3 May 75	123	130925	215548
4 May 75	124	120017	211918
5 May 75	125	140220	170515
6 May 75	126	123017	183744
7 May 75	127	191927	203108
13 May 75	133	012756	080304
14 May 75	134	125655	000752
15 May 75	135	003512	183416
16 May 75	136	163134	002436
17 May 75	137	003802	072309
		073839	173225
19 Jun 75	170	024200	034045

ELECTRONIC CONTROL REPORT

OPR-517-PE-75

PE-40-2-75

H-9531

Horizontal control for the entire survey was accomplished through the use of third party Raydist operating at a frequency of 3296.495 kHz.

From position 001 thru position 478, the Raydist was operated in the hyperbolic mode. The station locations were:

Slave I	HAVEN	lat.	39 32 51.112 N	(Red)
		long.	74 15 12.847 W	
Master	BEN	lat.	40 34 58.430 N	
		long.	73 52 45.106 W	
Slave II	TIANA	lat.	40 50 13.969 N	(Green)
		long.	72 29 40.176 W	

The balance of the hydrography, positions 543 thru 1373, was accomplished with Raydist operating in the range/range mode. The former master station, BEN, was converted to Slave I. Slave II remained at the previous location.

The reason for this change was the inability of the Raydist to hold a lane count during the evening hours while operating in the hyperbolic mode. It was surmised that the combination of the land path between the master and slave stations and the sky wave generated at night prevented the Raydist from operating properly. Prior to switching to the range/range mode, a number of attempts were made to get the hyperbolic chain working. This included re-tuning all of the stations, increasing the power output at the slave stations and boosting the power output at the master station through the use of a linear amplifier. All

efforts were to no avail.

Upon switching to the range/range mode, thereby eliminating the land mass between the master and the slave stations, the system operated properly. Operation has only been interrupted by occasional severe thunderstorms.

Hydrography conducted during the evening while operating in the hyperbolic mode has been rejected due to the unstable nature of the signal being received. Hydrography conducted during the daylight hours was deemed acceptable due to the stable nature of the signal and the consistency of calibrations performed on the same day.

All calibrations were computed from three point sextant fixes with check angles. Correctors were computed using RK 561. The calibration data is included with the supplemental data submitted with PE-40-2-75, H-9531.

SIGNAL LIST

001	7	32	32	51112	074	15	12347	250	0000	320640
002	7	40	34	50430	073	52	45167	250	0000	320640
003	7	40	50	13069	072	29	45176	250	0000	320640
021	7	40	03	45343	074	01	29393	139	0000	000000
022	7	40	10	30795	074	01	46694	139	0000	000000
023	7	40	11	37193	074	01	21295	139	0000	000000
024	7	40	12	06249	074	01	15031	139	0000	000000
025	7	40	13	30340	073	59	59663	139	0000	000000
027	7	40	15	23412	074	00	11536	139	0000	000000
028	7	40	10	29025	073	59	24371	139	0000	000000
030	7	40	20	32350	073	50	20956	139	0000	000000
031	7	40	27	41799	074	00	00813	139	0000	000000
033	7	40	23	45240	073	59	09203	139	0000	000000
051	7	40	16	39136	073	59	10766	139	0000	000000

001	HAVEN	
002	DEW	
003	TIANA	
021	SPRING LAKE ESSEX-SUSSEX HOTEL FLAGPOLE	VOL. I, PG 440
022	DELMAR BLACK STANDPIPE	VOL. I, PG 405
023	KNOW WATER TANK	VOL. II, PG 001
024	DELMAR SILVER TANK	VOL. I, PG 405
025	ASHBURY PARK BERKLEY HOTEL FLAGPOLE	VOL. I, PG 405
027	DEAL INCINERATOR STACK	VOL. I, PG 571
028	LONG BEACH JCP & L CO. CONCRETE STACK	VOL. I, PG 071
030	LOMOUTH BEACH C. G. RADIO TOWER	VOL. II, PG 002
031	SANDY HOOK LIGHTHOUSE	VOL. I, PG 570
033	DAVISIAK LIGHT SOUTH	VOL. I, PG 424
051	EAST END ST. MICHAELS CHURCH SPIRE CROSS	VOL. I, PG 445

001 THRU 003 WERE LOCATED BY THE ATLANTIC MARINE CENTER FOR USE AS ELECTRONIC CONTROL STATIONS. DESCRIPTIONS OF THESE STATIONS ACCOMPANY THIS REPORT.

SIGNALS 021 THRU 051 ARE ALL LOCATED IN MONMOUTH COUNTY, NEW JERSEY.

CAMS-
1/31/74

ATLANTIC MARINE CENTER

ELECTRONIC CONTROL PARAMETERS

1. Project # OPR-517 2. Reg. # H-9531 3. Field # PE-40-2-75
4. Type of Control: Raydist (Hi-Fix, Raydist, EPI, etc.)
5. Frequency 3296.495 KHz (for conversion of electronic lanes to meters)
6. Mode of Operation (check one):

Range-Range ☐

Range One (R₁)

Station I.D. _____

Range Two (R₂)

Station I.D. _____

Range-Visual ☐

Lat. _____° _____' _____"

Long. _____° _____' _____"

Lat. _____° _____' _____"

Long. _____° _____' _____"

Hyperbolic (3-station) ☒

Slave One

Station I.D. Haven Sea-Fix, 1975

Master

Station I.D. Ben Sea-Fix, 1975

Slave Two

Station I.D. Tiana Sea-Fix, 1975

Hyper-Visual ☐

Lat. 39° 32' 51.112"

Long. 74° 15' 12.847"

Lat. 40° 34' 58.430"

Long. 73° 52' 45.106"

Lat. 40° 50' 13.969"

Long. 72° 29' 40.176"

7. Location of Survey:

Range-Range ☐

Imagine an observer is standing at R₁ Station and looking directly at R₂ (check one):

Survey area is to observer's Right ☐ A=0

Survey area is to observer's Left ☐ A=1

Hyperbolic ☒

Looking from survey area toward Master Station:

Slave One must be to observer's Left;

Slave Two must be to observer's Right.

8. ☐ This form is submitted as an aid in preparing a boat sheet.
☐ This form applies to all data on this survey.
☐ This form applies to part of the data on this survey.

Vessel
EDP #

From
Time Day

To
Time Day

Position Numbers
(inclusive)

2830

0001 to 0478

_____ to _____

_____ to _____

9. Remarks: _____

C/11/74
1/31/74

ATLANTIC MARINE CENTER
ELECTRONIC CONTROL PARAMETERS

1. Project # OPR-517 2. Reg. # H-9531 3. Field # PE-40-2-75
4. Type of Control: Raydist (Hi-Fix, Raydist, EPI, etc.)
5. Frequency 3296.495 KHz (for conversion of electronic lanes to meters)
6. Mode of Operation (check one):

Range-Range ☒

Range-Visual ☐

Range One (R₁)
Station I.D. Ben Sea-Fix, 1975
Range Two (R₂)
Station I.D. Tiana Sea-Fix, 1975

Lat.	40	°	34	'	58.430	"
Long.	73	°	52	'	45.106	"
Lat.	40	°	50	'	13.969	"
Long.	72	°	29	'	40.176	"

Hyperbolic (3-station) ☐

Hyper-Visual ☐

Slave One
Station I.D. _____
Master
Station I.D. _____
Slave Two
Station I.D. _____

Lat.	°		'	"
Long.	°		'	"
Lat.	°		'	"
Long.	°		'	"
Lat.	°		'	"
Long.	°		'	"

7. Location of Survey:

Range-Range ☒ Imagine an observer is standing at R₁ Station and looking directly at R₂ (check one):

Survey area is to observer's Right ☒ A=0

Survey area is to observer's Left ☐ A=1

Hyperbolic ☐ Looking from survey area toward Master Station:

Slave One must be to observer's Left;

Slave Two must be to observer's Right.

8. ☐ This form is submitted as an aid in preparing a boat sheet.

☐ This form applies to all data on this survey.

☐ This form applies to part of the data on this survey.

Vessel EDP #	From Time	Day	To Time	Day	Position Numbers (inclusive)
<u>2830</u>	_____	_____	_____	_____	<u>543</u> to <u>1374</u>
_____	_____	_____	_____	_____	_____ to _____
_____	_____	_____	_____	_____	_____ to _____

9. Remarks: _____

CORRECTIONS
TO
ECHO SOUNDINGS

GENERAL

This report covers corrections to echo soundings taken by the NOAA Ship PEIRCE (CSS-28) on the following days: 3 May 1975 to 17 May 1975. The corrections apply only to Survey PE 40-2-75.

Final corrections are a combination of velocity and TRA corrections which are discussed separately.

The ship operated with a Ross Model 5000 Ser No. C-537-1039-5 fathometer. No problems were encountered that would seriously affect the results of the soundings taken.

VELOCITY CORRECTIONS

There is one velocity table for this survey. The correctors were determined from TDC data collected by the ship and computer using PDP-8E software package (program RK 530 6/25/74). The NOAA Ship George B. Kelez was conducting STD observations in the vicinity and copies of their data was obtained. Results of the KELEZ casts are plotted along with our TDC results on the enclosed graph. A chart section is included showing location of KELEZ stations. The velocity correctors used correspond closely with the May data from KELEZ.

TRA CORRECTIONS

TRA corrections are a combination of the following:

- a. Draft
- b. Initial Variation
- c. Settlement and Squat

DRAFT

Draft corrections for the NOAA Ship PEIRCE were obtained by measuring the draft upon entering and leaving port. A linear relationship was then assumed and the draft corrections were applied on a daily basis.

INITIAL VARIATION

The Ross fathometer was maintained at zero initial variation by utilizing its built in calibration circuitry.

SETTLEMENT AND SQUAT

Determination of settlement and squat took place on 1 April 1974. Form CAM 3-12 is the abstract of speeds which lists the settlement and squat correctors applied for this survey.

TRA correctors may be inserted in any of the following places:

1. Hydroplot Controller
2. Corrector Tape
3. TC/TI Tape

The total corrector is the algebraic sum of the correctors in the above locations. For this survey, the hydroplot controller was maintained at +11.0 ft. No correctors appear on the corrector tape. Deviations from +11.0 feet are on the TC/TI Tape.

Depth from Transducer

VELOCITY TABLE 1
OPR-517, PE- 40-2-75

000133	0	0002	0001	000	283000	040275
000235	0	0004				
000375	0	0006				
000525	0	0008				
000705	0	0010				
000880	0	0012				
001075	0	0014				
001255	0	0016				
001440	0	0018				
001625	0	0020				
001805	0	0022				
999999	0	0024				

Wrong program used to apply
corrector but error is only about
0.2 ft.

VELOCITY CORRECTION TABLE OPTIONS:

- 0) NO TABLE
- 1) IN FEET
- 2) IN FATHOMS
- 3) IN METERS

1

DRAFT = 11.0

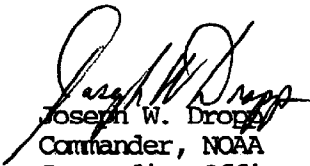
TRUE DEPTH (SURFACE) (FT)	FATHOMETER DEPTH (FT)	VELOC CORRECTION (FT)
0010.01	0000.00	0000.00
0024.93	0013.75	0000.18
0041.17	0029.79	0000.38
0057.41	0045.84	0000.58
0073.82	0062.04	0000.78
0090.55	0078.56	0000.99
0106.96	0094.81	0001.14
0123.03	0110.75	0001.28
0139.44	0127.01	0001.42

ABSTRACT OF DRAFT

<u>Date</u>	<u>Julian Day</u>	<u>Draft</u>
3 May 1975	123	9.9 ft.
4 May 1975	124	9.9
5 May 1975	125	9.9
6 May 1975	126	9.8
7 May 1975	127	9.8
8 May 1975	128	9.8
13 May 1975	133	10.0
14 May 1975	134	9.9
15 May 1975	135	9.8
16 May 1975	136	9.8
17 May 1975	137	9.7

APPROVAL SHEET

Field work on PE 40-1-75 was done under my immediate daily supervision. The Boat Sheet and all records have been reviewed and are approved by me.


Joseph W. Dropp
Commander, NOAA
Commanding Officer
NOAA Ship PEIRCE (CSS-28)

ATLANTIC MARINE CENTER
APPROVAL SHEET
FOR
AUTOMATED SURVEY H- 9531

- 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: 09/09/76

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: 9/14/76

Signed: Robert A. [Signature]

Title: Chief, Processing Division

GEOGRAPHIC NAMES

H-9531

Name on Survey	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 MCNALLY ATLAS	U.S. LIGHT LIST		
Asbury Park (T.H.)										1
										2
										3
										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25

APPROVED

Chris Harrington

STAFF GEOGRAPHER - C51K2

2 Dec. 1976

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-9531
PE-40-2-75

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & smooth excess, PNO (mylar)		1	BOAT SHEETS & development ovly. (mylar)		1	
DESCRIPTIVE REPORT		1	OVERLAYS		3	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES			1			
CAHIERS	1-with printouts		1			1
VOLUMES						
BOXES			1-smooth P/O, sawtooth rec., sndg. vol., misc. data			

T-SHEET PRINTS (List)

None

SPECIAL REPORTS (List)

1-Sounding Volume used as daily log

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				1260
POSITIONS CHECKED		150		
POSITIONS REVISED		0		
DEPTH SOUNDINGS REVISED		31		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		0		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		0		
JUNCTIONS		8		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		25		
SPECIAL ADJUSTMENTS		0		
ALL OTHER WORK		75		
TOTALS		108	42	
PRE-VERIFICATION BY QUALITY CONTROL BY		BEGINNING DATE	ENDING DATE	
<i>X. W. Wellman</i> 25 hrs		11-24-76	12-1-76	
VERIFICATION BY		BEGINNING DATE	ENDING DATE	
W. Tyndall, H. Smith and R. Roberson		08/15/75	06/11/76	
REVIEW BY		BEGINNING DATE	ENDING DATE	
Hydrographic Inspection Team (AMC)		09/09/76	09/14/76	

1 Baumgardner 6 hrs 1/10/77 *Carsten 05.0 12/15/76*

REGISTRY NO. H-9531

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:

H-9531

Items for Future Presurvey Reviews

The charted items recommended for retention in section 2E of the Review Report should be investigated by wire-drag and verified or disproved during future work in the area.

<u>Position Index</u>		<u>Bottom Change Index</u>	<u>Use Index</u>	<u>Resurvey Cycle</u>
<u>Lat.</u>	<u>Long.</u>			
400	0740	3	6	25 years
400	0735	2	6	25 years
401	0740	3	9	25 years
401	0735	2	9	25 years

HYDROGRAPHIC SURVEY REVIEW

FIELD NO.: PE-40-2-75

SCALE: 1:40,000

CONTROL: Raydist
(Range-Range
and Hyperbolic
Mode)

Chief of Party CDR J.W. Dropp
 Surveyed by LT D.L. Suloff
 LT G.W. Jamerson
 LTJG K.M. Holden
 LTJG B.B. Johnson
 ENS D.A. Dreves
 ENS K.W. Santarelli
 Automated Plot by Calcomp Plotter #618 (AMC)
 Verified and Inked by R.G. Roberson

- A. Crossings: Depths at crossings are in good agreement.
- B. Depth Curves: The standard depth curves adequately represented the bottom. Several brown curves have been added to emphasize other bottom features.

C. Developments: The development of the bottom configuration is adequate; however, additional lines should have been run in the vicinity of the Pre-survey Review Items to verify or disprove their existence. These items are discussed later in this report.

D. Bottom Samples: The bottom samples were taken by the NOAA Ship GEORGE B. KELEZ; however, they were not complete at the time the sheet was verified. Those bottom samples received were plotted from G.P.'s taken from the Log-M sheets. The soundings were considered as "missed depths" and the G.P.'s were not verified. The bottom sampling is considered incomplete.

E. Pre-survey Review Items: (See Q.C. Report - Items 1 and 2)

(1) Numbered Pre-survey Review Items:

Dangerous sunken wreck, P.A. (45 foot reported) PSR Item #6, charted in latitude 40° 13.7'N, longitude 73° 50.2'W - Developed and investigated by divers with a shoalest depth by lead line of 58 feet. The wreck was located ^{approximately 600} ~~140~~ meters west-northwest of the charted position. Recommend the charted location be revised to the position located during this survey. (Originates with NM 22/63)
(also use present depth)

Sunken wreck (reported destroyed) PSR Item #7, charted in latitude 40° 15.93'N, longitude 73° 47.53'W - the area was developed and no indication was found. Recommend it remain, as charted until proved or disproved by wire drag.

Dangerous sunken wreck, P.A. (55 foot reported) PSR Item #11, charted in latitude 40° 06.5'N, longitude 73° 40.36'W - A 113 foot sounding was found during development in general depths of 116 to 125 feet. Recommend it remain as charted until further investigation by wire drag. (Originates with L 191/72)

(2) Un-numbered Pre-survey Review Items:

The 73 foot wire drag ^{cleared depth} ~~sounding~~ charted in latitude 40° 10' 25"N, longitude 73° 40' 57"W - Not developed or ^{obstruction} found. Brought forward from F.E. No. 10, 1951 W.D. Recommend it remain, as charted pending future wire drag investigation.

The 95 foot wire drag ^{cleared depth} ~~sounding~~ charted in latitude 40° 13' 00"N, longitude 73° 44' 32"W - Not developed or ^{obstruction} found. Brought forward from F.E. No. 10, 1951 W.D. Recommend it remain charted until proved or disproved by wire drag.

The 122 foot wire drag ^{cleared depth} ~~sounding~~, charted in latitude 40° 12.75'N, longitude 73° 45.63'W - Not developed or found. Source unknown by this office. Recommend it remain charted until proved or disproved by wire drag. This item has not been brought forward to this survey. (Sources: H.O. Wreck List of 1957 and F.E. No. 10, 1951)

The 82 foot dashed-circled sounding, charted in latitude 40° 08.83'N, longitude 73° 48.12'W - Originates with H-6190 (1936). An 85 foot sounding was found adjacent to the charted sounding. The 82 foot sounding has been brought forward to the present survey pending further investigation. It is recommended that this item be wire dragged at an opportune time.

Nondangerous wreck charted in latitude 40° 13.38'N, longitude 73° 40.70'W - Not developed or found. A 97 foot sounding was found 1.2 miles south-southwest of charted position. This appears to be an obstruction protruding about nine feet off the bottom. Recommend the wreck ~~it~~ remain, as charted, until proved or disproved by wire drag. It is recommended that this additional item be charted as an obstruction, as shown on this survey.

Nondangerous wreck, charted in latitude 40° 12.21'N, longitude 73° 46.00'W - Not developed or found. Recommend it remain, as charted, until proved or disproved by wire drag. ~~Not carried forward to this survey~~

3. 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, with the following exceptions:

1. Page 1 and 2 of the Sounding Volume (Ops. log) was not completed and the required stamps were not used.
2. The line spacing for shoal areas, less than 11 fathoms, should have been 200 meters as per Project Instructions. Approximate positions: latitude 40° 12.0'N and longitude 73° 52.0'W; latitude 40° 13.3'N and longitude 73° 52.0'W.
3. Project Instructions, paragraph 2.9 (a) - the running of every other line - and paragraph 2.9 (b) - the running of crosslines at low-water, were not followed.
4. The daily ^eland count abstract did not indicate that it had been checked; therefore, this check had to be made by the verifier.

5. A shoal was indicated centered at latitude 40° 08'N, longitude 73° 48.3'W. A 15 foot difference in adjacent soundings at depths of 85-100 feet. This area should have been developed to obtain a least depth. *Retain prior 82*

6. Re: "Corrections to Echo Soundings" - Settlement and Squat. TRA correctors were correctly applied during the survey. The explanation of how TRA was applied is confusing. It appears that the intent of the last paragraph in the above mentioned section is correct; however, it is worded incorrectly which could lead to questions of proper field procedures.

4. Junctions

An adequate junction has been effected with the following surveys: H-9546 (1975) to the south
H-9567 (1975) to the east

There were no contemporary surveys to the north or west.

5. Comparison With Prior Surveys (See Q.C. Report-items 4 and 5)

A. H-6026 (1936) 1:40,000

The area covered by this survey shows a minimum of changes. Any variance could have been caused by improved hydrographic technology.

B. H-6190 (1936) 1:40,000

This survey covers all of the limits of the present survey and only minor depth differences^V could be detected. Agreement was excellent. (± 0 to 3 ft)

6. Comparison With Published Charts (See Q.C. Report-item 6)

(formerly 1216) ⁵ September 1 ³
#12323, 16th edition, dated ~~August 30, 1978~~ and #12326, (formerly 1215)
28th edition, dated ~~September 6, 1975~~
⁸ October 5, 1974

A. Hydrography: The charted hydrography originates with the previously discussed prior surveys which requires no further consideration.

Except as noted, ^{in section 2 E above,} the present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation: The aids to navigation on the present survey ^{is} are in substantial agreement with ~~their~~ its charted positions.

7. Compliance With Instructions

This survey complies with the Project Instructions except for those items mentioned under "Condition of the Survey" of this report.

8. Additional Field Work


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


9. Hydrographic Inspection Team Comments

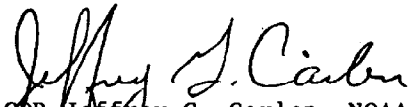
Hydrographic Inspection Team comments are included within this report and Verification deficiencies found have been corrected on the Smooth Sheet.

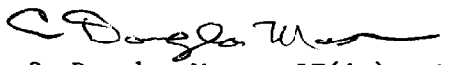
Approval Sheet for H-9531

Examined and Approved:
Hydrographic Inspection Team
Date: **Sept. 09, 1976**


CAPT Ronald M. Buffington, NOAA
Chief, Operations Division

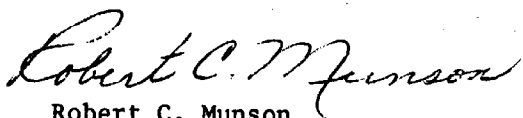

CDR Robert A. Trauschke, NOAA
Chief, Processing Division


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


C. Douglas Mason, LT(jg), NOAA
Chief, EDP Branch


William L. Jonns
Chief, Verification Branch

Approved/Forwarded


Robert C. Munson
RADM, NOAA
Director, Atlantic Marine Center



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

C352

December 1, 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-9531 (1975), New Jersey, New York
Bight, Off Asbury Park

A quality control inspection of H-9531 (1975) 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 reviewer, and cartographic presentation of data.

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

1. When charted features; e.g., wrecks and questionable charted soundings; are adequately resolved by appropriate recommendations included in the Descriptive Report, it is sufficient to include a reference in the review (Comparison with Chart) directing attention to the appropriate section of the Descriptive Report thereby obviating the need to include additional comments concerning the same features in the Review Report. [See provisional manual - section 6.6(12).] In addition, a note indicating concurrence with, or necessary revisions to, the hydrographer's recommendations should be added to the relevant sections of the Descriptive Report.
2. Comments contained in section 2E of the Review Report (Presurvey Review Items) would have been more appropriately included in section 6 of the Review Report (Comparison with Published Charts).
3. Reference section 5 of the Review Report (Comparison with Prior Surveys):

The reviewer failed to include a discussion of the comparison between the present survey and F.E. No. 10 (1951) W.D., although two hang depths were



35

carried forward from this F.E. to supplement the present survey. There are no conflicts between present survey depths and cleared depths on this prior wire-drag survey. [See provisional manual- section 6.6(11).]

4. The reviewer failed to state that the prior surveys are superseded by the present survey. [See provisional manual - section 6.6(11).] Sections 5-A and 5-B of the Review Report are supplemented by the following:

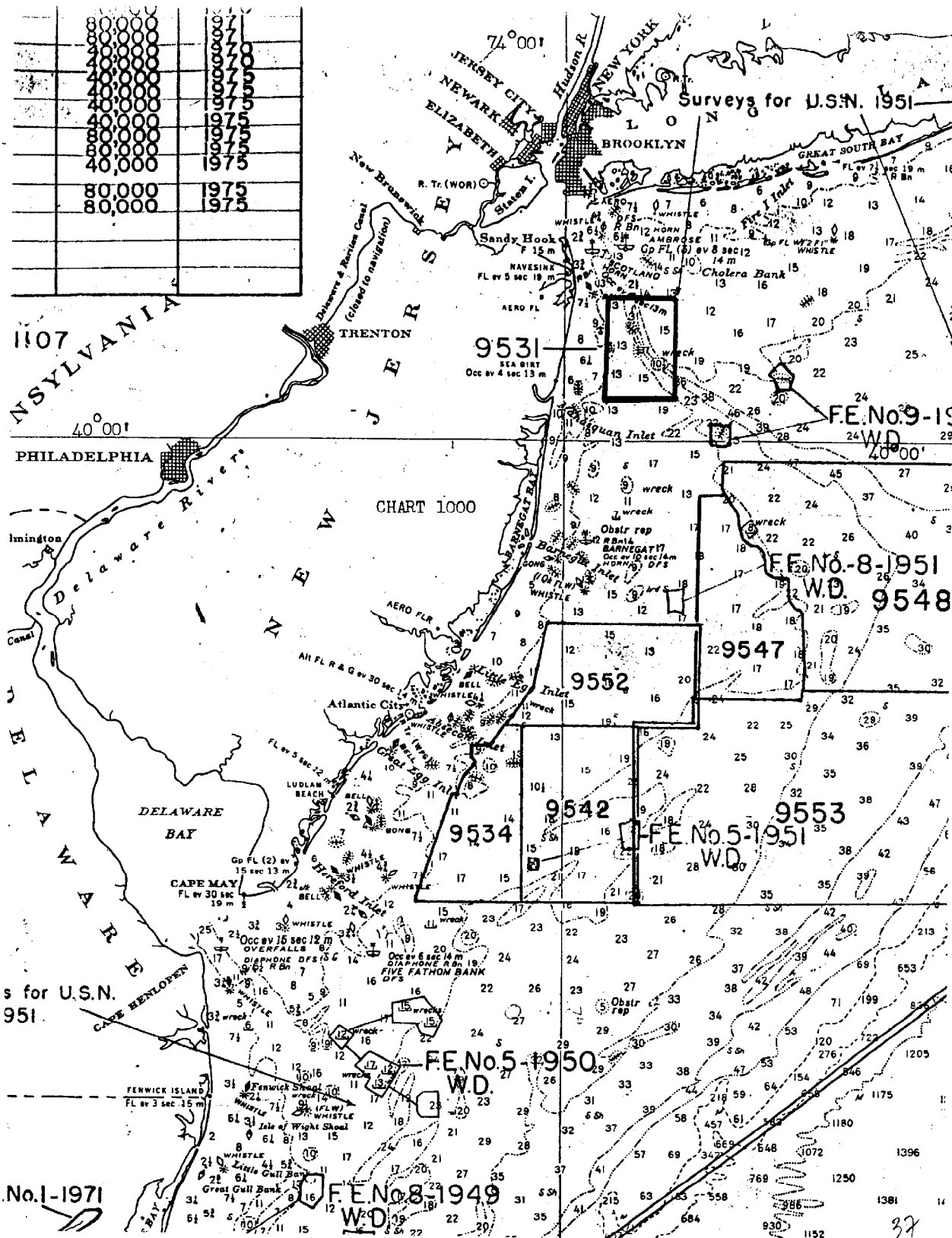
The present survey is adequate to supersede the prior survey within the common area.

5. It is common practice to use various colored inks to avoid confusion concerning the source(s) of information carried forward from junctional or prior surveys. Inasmuch as red ink had been used to designate the junction with H-9546 (1975), it is considered improper to use it for the 82-foot sounding carried forward from H-6190 (1936) which falls in close proximity to the junction with H-9546. This prior survey sounding was inked in brown ink during quality control inspection. In addition, several bottom characteristics were carried forward from H-6190 to supplement the present survey.

6. The reviewer failed to forward the charts utilized in the chart comparison and further, utilized the wrong editions of the charts. (See provisional manual - sections 6.3.10 and 8.3.12.)

cc:
C351

1107
PENNSYLVANIA



RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9531

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

[illegible]