

9532

Diag. Cht. Nos. 1215-3 & 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. PE-80-1-75
Office No..... H-9532

LOCALITY

State NEW YORK - NEW JERSEY
General Locality NEW YORK BIGHT
Locality SOUTH OF LONG ISLAND

19 75

CHIEF OF PARTY
J. W. DROPP

LIBRARY & ARCHIVES

DATE 1-12-77

9532

Area 2 & 1

Charts
- 1214
- 1215
- 1108
- 1000
- 70

HYDROGRAPHIC TITLE SHEET

H-9532

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.

H-9532
PE-80-1-75

State New York - New Jersey

General locality New York Bight

Locality South of Long Island
~~Offshore~~

Scale 1:80,000 Date of survey 4 April-16 June 1975

Instructions dated 27 March 1975 Project No. OPR-517-MI,WH,PE-75

Vessel NOAA Ship PEIRCE (CSS-28) 2830

Chief of party Commander Joseph W. Dropp, NOAA

Surveyed by LCDR Suloff, LT Jamerson, LTJG Johnson, LTJG Dreves,
LTJG Holden, ENS Santarelli

Soundings taken by echo sounder, ~~hand lead, pole~~ (Echo Sounder) Ross Model 5000
S/N C-537-1039-5

Graphic record scaled by Ship's Personnel

Graphic record checked by Survey Department and Commissioned Officers ^{Verification} Branch, AMC

Protracted by Hydroplot system EDP, AMC Automated plot by EDP, AMC; CALCOMP 618

Verification by L.G. Cram

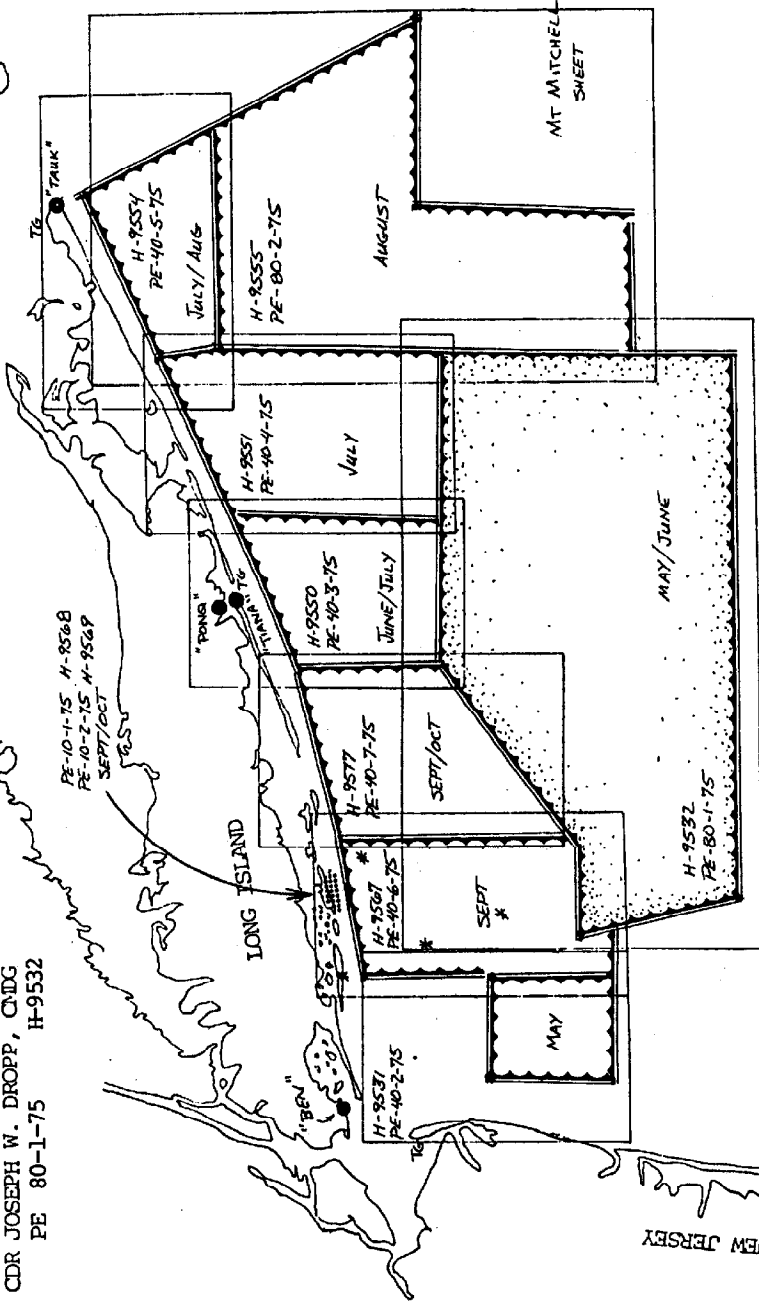
Soundings in ~~fathoms~~ feet at MLW ~~MLW~~ (SNDGS) feet

REMARKS: All times are Greenwich Mean Time

All corrections in Red by L.G. Cram

Applied to stid 5/11/77
[Signature]

SHEET LAYOUT PLAN
 OPR - 517
 1975 FIELD SEASON
 NEW YORK BIGHT AREA
 SCALE OF CHART - 13003
 NOAA SHIP PEIRCE
 CDR JOSEPH W. DROPP, CVDG
 PE 80-1-75 H-9532



WHITING SHEETS

- LEGEND:
- RAWDIST STATIONS
 - TG TIDE GAGES (SOME)
 - * OITS TIDE GAGES

DESCRIPTIVE REPORT

To Accompany

Hydrographic Survey H-9532

Field Number PE-80-1-75

OPR-517-PE-75

Atlantic Seaboard Area Project

New York Bight Phase

1975 Field Season

NOAA Ship PEIRCE (CSS-28)

Joseph W. Dropp

Commander

Chief of Party

A. PROJECT

This survey was conducted in accordance with Project Instructions OPR-517-MI, PE, WH-75, Atlantic Seaboard Area Project (ASAP), New York Bight Phase, dated March 27, 1975, amended by change number 1, dated April 14, 1975.

B. AREA SURVEYED

The area surveyed is approximately 1442.1 square miles and is bounded by a line drawn through the following points:

- a. 40°09.4'N 73°33.5'W,
- b. 40°09.4'N 73°21.4'W,
- c. 40°25.5'N 72°58.6'W,
- d. 40°25.5'N 72°15.3'W,
- e. 39°55.8'N 72°15.4'W,
- f. 39°55.8'N 73°28.5'W.

C. SOUNDING VESSELS

This survey was accomplished by the NOAA Ship PEIRCE. Position numbers for the vessel were 001 through 3267.

D. SOUNDING EQUIPMENT

The ship operated with a Ross Model 5000 S/N C-537-1039-5 Fathometer. Depths ranged from 120 to 290 feet. A detailed description of echo sounding corrections is contained in the Corrections to Echo Soundings Report which accompanies this report.

E. SMOOTH SHEET

The smooth sheet for this survey will be plotted by computer at the Atlantic Marine Center from the raw data provided by the PEIRCE.

F. & G. CONTROL

Horizontal position control is discussed in detail in the electronic control report which accompanies this report.

H. SHORELINE

There is no shoreline to be considered on this survey.

I. CROSSLINES

All crosslines were run at low water in accordance with predicted tides and constitute approximately 10.9% of all hydrography exclusive of developments. Crossline depths are in good agreement with the main scheme depths; generally within one foot.

J. JUNCTION SURVEYS

This sheet was done prior to those sheets of OPR-517 with which it joins, therefore, junctions with contemporary surveys will be included in subsequent descriptive reports. Joins ^{MI-80-2-75 PE-40-3-75 PE-40-4-75} H-9577 - H-9550 - H-9551, ^{PE-80-2-75} to the North; H-9555 ^{WA-80-1-75 WH-80-2-75} to the East; H-9548 - H-9574, ^{WH-40-1-75} to the south and H-9546 - H-9567 ^{PE-40-6-75} to the West.

K. COMPARISON WITH PRIOR SURVEYS

This survey was compared with five (5) prior surveys..

H-6347	1:120,000	1938
H-6192	1:120,000	1936
H-6223	1:40,000	1937
H-6191	1:40,000	1936
H-6331	1:80,000	1938

Agreement appears to be good with all prior surveys with the exception of H-6192. In those areas of good agreement, differences usually do not exceed 1 to 3 feet. In the comparison with H-6192, differences usually range from 5 to 11 feet except where it adjoins other surveys where again differences are usually 1 to 3 feet. In general, it appears that the depth curves have shifted approximately two (2) nautical miles east when H-6192 is compared to this survey. Discrepancies could be due to differences between sound velocity corrections, horizontal control, or tides. Predicted tides were used in preparing this data and it may be that when smooth tides are applied, any discrepancies which exist may be reduced.

L. COMPARISON WITH CHART

A comparison was made with largest scale chart covering the survey area -- approaches to New York, Nantucket Shoal to Five Fathom Bank; N.O. 12120, 1:400,000, 22nd edition, May 25/75 (formerly C&GS 1108).

The soundings were found to be usually in good agreement with the exception of the southwestern quarter of the survey area near the Hudson Canyon. The rapidly changing bottom and scale differences (1:80,000 VS 1:400,000) make direct comparison of soundings difficult. The charted contours; however, correctly make the sides and bottom of the canyon. This survey shows the northern slope into the canyon to be 5 to 10 feet deeper than charted.

PSR#1 is an obstruction charted at 40°04.0'N 73°31.0'W. In addition to regular sounding lines, the area was developed with 50 meter line spacing extending about one nautical mile east-west and one-half mile north-south. No indication of the obstruction was seen on the fathogram. It is recommended that this item remain as charted. The obstruction could have been missed by narrow-beam fathometer.

PSR#2, a dangerous wreck charted at 40°22'N 72°20'W, was not seen on regular sounding lines so six (6) additional lines at 50 meter spacing were run -- three (3) north-south and three (3) east-west. No indication of wreckage was seen on the fathogram. This investigation is not sufficient to warrant deleting the wreck. Both pre-survey review items specifically requested investigation only if an indication of wreckage was seen during routine sounding lines in the area. This development not verified as no data was turned in by vessel; No fathograms, No printouts

cleared by

A charted wreck at 40°08'03"N, 73°21'54"W was previously wire dragged ~~at~~^{to} a depth of 118 feet as shown on the chart. While developing the area a spike was observed on the fathogram showing a least depth of 124 feet in an area of 125 to 130 foot depths at 40°07'45"N, 73°21'55"W (see position numbers 623-666). It is unknown whether this spike is associated with the charted wreck. The positions are 0.3 mile apart.

M. ADEQUACY OF SURVEY

This survey is adequate to supercede prior surveys for charting purposes. Bottom samples were not taken as per instructions.

N. AIDS TO NAVIGATION

There are no fixed aids or landmarks located in the survey area. Four floating aids were located in the survey area and the discrepancies between the charted positions and the actual positions are noted below. Since these aids are located in open water, marking traffic separation zones, their absolute positions are not regarded as critical to safe navigation.

<u>Buoy</u>	<u>Charted LAT/LONG</u>	<u>Observed LAT/LONG</u>	<u>Day/Position #</u>
"HA"	40°07.6'N 73°21.5'W	40°06.6'N 73°21.2'W	J.D. 138/208
"NB"	40°25.7'N 73°11.5'W	40°25.9'N 73°11.6'W	J.D. 141/810-811 <i>NOT in Limits of Hydro Plotted on H-9577 (PE-40-7-75)</i>
"BA"	40°20.8'N 73°47.7'W	40°20.7'N 73°47.7'W	J.D. 149/none <i>out of survey area!</i>
"NA"	40°26.8'N 72°20.0'W	40°26.5'N 72°20.0'W	J.D. 165/2989 <i>area plotted on H-9551 (PE-40-3-75)</i>

Buoy characteristics are correct as charted. Note that the last three (3) buoys are not strictly within the survey limits but in close proximity.

O. STATISTICS

No. of Positions	3267
No. of Hydro miles	3967.4
No. of X-Line miles	363.1
No. of Square miles	1442.1
No. of TDC's	4
No. of Nansen Casts	2
No. of Lead Line	0
Comparisons	0
<i>Bottom samples</i>	<i>70</i>

P. MISCELLANEOUS

All times are GMT.

The master data tape and printout are considered original data. Corrector tapes were generated only for that data which was in error. All erroneous data was retained on the master data tapes.

Q. RECOMMENDATIONS

It is recommended that this survey be considered adequate to supercede prior soundings in the area. Obstructions and wrecks were neither proven or disproven, hence PSR Items 1 and 2 should remain as charted. Bottom characteristics can be checked against data being collected in conjunction with the MESA New York Bight Project. Large areas within the survey limits are being considered for use as possible "alternative dumpsites" by New York. For discussion see report entitled "MESA-Marine Ecosystems Analysis Program," March 1975 (NOAA TR ERL-MESA 2).

R. AUTOMATED DATA PROCESSING

The following programs were used in collecting and processing the data for this survey:

RK 111	Range-Range Real Time Hydroplot	8/7/74
RK 201	Grid, Signal, Lattice Plot	4/18/75
RK 211	Range-Range Non-real-time Plot	8/16/74
RK 300	Utility Computations	5/22/75
PM 360	Electronic Corrector 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
AM 602	Elinore Line Editor	5/21/75

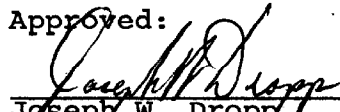
S. REFERENCE TO REPORTS

All reports and information is included with the Descriptive Report or survey records. Note that Echo Soundings and Horizontal Control Reports are appended following the text of this report.

Respectfully submitted,

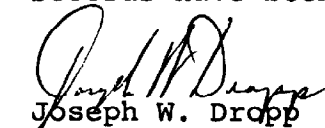
Kenneth W. Santarelli
ENS., NOAA

Approved:


Joseph W. Dropp
CDR., NOAA

Approval Sheet

Field work on PE-80-1-75, H-9532 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)

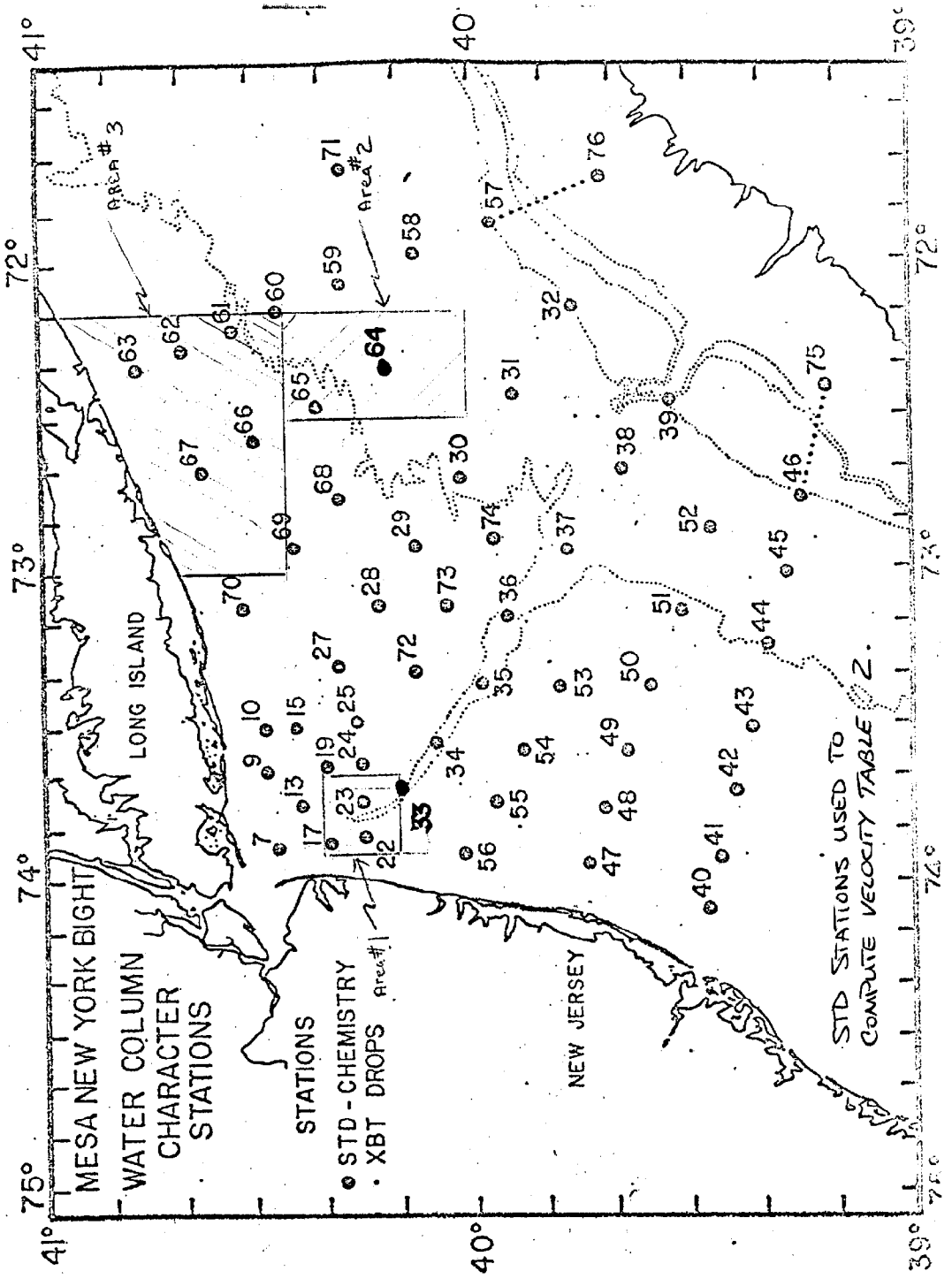
002-----BEN (ELECTRONIC)
 003-----TIANA (ELECTRONIC)
 004-----HOLDGATE WATER TANK
 005-----BEACH HAVEN WATER TANK
 006-----LONG BEACH WATER WORKS STANDPIPE
 007-----BRANT BEACH WATER TANK
 008-----SURF CITY STANDPIPE
 009-----HARVEY CEDARS COAST GUARD CUPOLA
 010-----HIGH POINT STAANDPIPE
 011-----BARNEGAT LT. NEW WATER TANK
 012-----BARNEGAT LIGHT HOUSE
 013-----SEA SIDE PARK WATER TANK (SHORE)
 014-----SEA SIDE PARK NEW WATER TANK
 015-----SEA SIDE HEIGHTS WATER TANK
 016-----LAVALLETTE STANDPIPE
 017-----NORMANDY BEACH WATER TANK
 018-----BAY HEAD WATER TANK
 019-----POINT PLEASANT MUNIC WATER TANK
 020-----SEA GIRT LIGHT HOUSE
 021-----SPRING LAKES ESSEX-SUSSEX HOTEL FLAG POLE
 022-----BELMAR BLACK STAND PIPE
 023-----AVON WATER TANK
 024-----BELMAR SILVER WATER TANK
 025-----ASHBURY PARK BERKLEY HOTEL FLAG POLE
 026-----ALLEN HURST WATER WORKS RED STACK
 027-----DEAL INCENERATOR STACK
 028-----LONG BEACH JCP & L CO. CONCRETE STACK
 029-----LONG BEACH CRR OF NEW JERSEY TANK
 030-----MOMOUTH BEACH COAST GUARD RADIO TOWER
 031-----SANDY HOOK LIGHT
 032-----EAST TWIN TOWERS
 033-----WEST TWIN TOWERS
 034-----JONES BEACH WATER TANK
 035-----FIRE ISLAND LIGHT HOUSE
 036-----HECKSCHER STATE PARK WATER TANK
 037-----WEST SAYVILLE TANK
 038-----NAVISINK LIGHT SOUTH
 039-----PATCHOGUE NEW WATER TANK
 040-----PATCHOGUE TANK
 041-----AMBROSE LIGHT
 042-----MORICHES C.G. RADIO MAST
 043-----EAST PORT MILLS WATER TANK
 044-----WESTT HAMPTON BOMARK WATER TANK
 045-----WEST HAMPTON WATER TANK (BEACH)
 046-----SHINNECOCK INLET C.G. TOWER
 0477-----FIRE ISLAND STANDPIPE
 048-----TOBAYY BEACH LOOKOUT TOWER ON CEDAR BEACH
 049-----NAVISINK LIGHT NORTH
 050-----SANDY HOOK STANDPIPE
 051-----WEST END ST. MICHAELS CHURCH
 052-----FIRE ISLAND C.G. RADIO MAST
 053-----SALTAIRE TANNK
 054-----OCEAN BEACH CATHOLICCHURCH SPIRE
 055-----OCEAN BEACH WATER TANK
 056-----SEAVIEW WATER TANK
 057-----POINT OF WOODS TANK
~~058-----EAST HAMPTON BOSCO CABLE CO. MAST~~
~~059-----EAST HAMPTON VILLIGE FLAGSTAFF~~
~~060-----EAST HAMPTON CHURCH SPIRE~~
 061-----EAST HAMPTON LARGE WATER TANK

002	7	40	34	58430	073	52	45107	250	0000	329649
003	7	40	50	13969	072	29	40176	250	0000	329649
004	7	39	32	06286	074	15	47098	139	0000	000000
005	7	39	33	46764	074	14	31479	139	0000	000000
006	7	39	35	10198	074	13	29143	139	0000	000000
007	7	39	37	24144	074	11	49200	139	0000	000000
008	7	39	39	49041	074	09	55912	139	0000	000000
009	7	39	41	25500	074	08	37090	139	0000	000000
010	7	39	42	27724	074	08	05856	139	0000	000000
011	7	39	45	24355	074	06	31927	139	0000	000000
012	7	39	45	51179	074	06	23919	139	0000	000000
013	7	39	54	22000	074	04	57765	139	0000	000000
014	7	39	56	06577	074	04	43169	139	0000	000000
015	7	39	56	36957	074	04	44488	139	0000	000000
016	7	39	58	07114	074	04	18747	139	0000	000000
017	7	39	59	53370	074	03	46974	139	0000	000000
018	7	40	04	06607	074	02	44160	139	0000	000000
019	7	40	05	09760	074	02	49979	139	0000	000000
020	7	40	08	11500	074	01	40397	139	0000	000000
021	7	40	08	48343	074	01	29390	139	0000	000000
022	7	40	10	38795	074	01	46694	139	0000	000000
023	7	40	11	37193	074	01	21295	139	0000	000000
024	7	40	12	06249	074	01	15631	139	0000	000000
025	7	40	13	30340	073	59	59663	139	0000	000000
026	7	40	14	00652	074	00	26205	139	0000	000000
027	7	40	15	23412	074	00	11586	139	0000	000000
028	7	40	18	29025	073	59	04371	139	0000	000000
029	7	40	18	38284	073	58	51014	139	0000	000000
030	7	40	20	32350	073	58	29956	139	0000	000000
031	7	40	27	41799	074	00	08813	139	0000	000000
032	7	40	35	05191	073	38	12366	139	0000	000000
033	7	40	35	04896	073	38	14084	139	0000	000000
034	7	40	35	46814	073	30	30626	139	0000	000000
035	7	40	37	56442	073	13	08442	139	0000	000000
036	7	40	42	51744	073	09	42081	139	0000	000000
037	7	40	43	56284	073	05	54813	139	0000	000000
038	7	40	23	45240	073	59	09203	139	0000	000000
039	7	40	45	43647	073	01	33460	139	0000	000000
040	7	40	45	42366	073	01	32511	139	0000	000000
041	7	40	27	34939	073	49	51432	139	000	000000
042	7	40	47	18784	072	44	42151	139	0000	000000
043	7	40	49	27940	072	43	53567	139	0000	000000
044	7	40	49	48695	072	41	01596	139	0000	000000
045	7	40	49	39185	072	37	21894	139	0000	000000
046	7	40	50	29579	072	28	44735	139	0000	000000
047	7	40	37	24672	073	15	43692	139	0000	000000
048	7	40	37	12759	073	23	08964	139	0000	000000
049	7	40	23	47250	073	59	10544	139	0000	000000
050	7	40	28	08591	074	00	28098	139	0000	000000
051	7	40	16	39136	073	59	10766	139	0000	000000
052	7	40	37	55065	073	12	59781	139	0000	000000
053	7	40	38	09603	073	11	34312	139	0000	000000
054	7	40	38	46702	073	09	30246	139	0000	000000
055	7	40	38	39253	073	09	23135	139	0000	000000
056	7	40	38	48910	073	08	55875	139	0000	000000
057	7	40	38	59331	073	07	52447	139	0000	000000

Velocity Table

OPR-517, PE-80-1-75, H-9532, PEIRCE

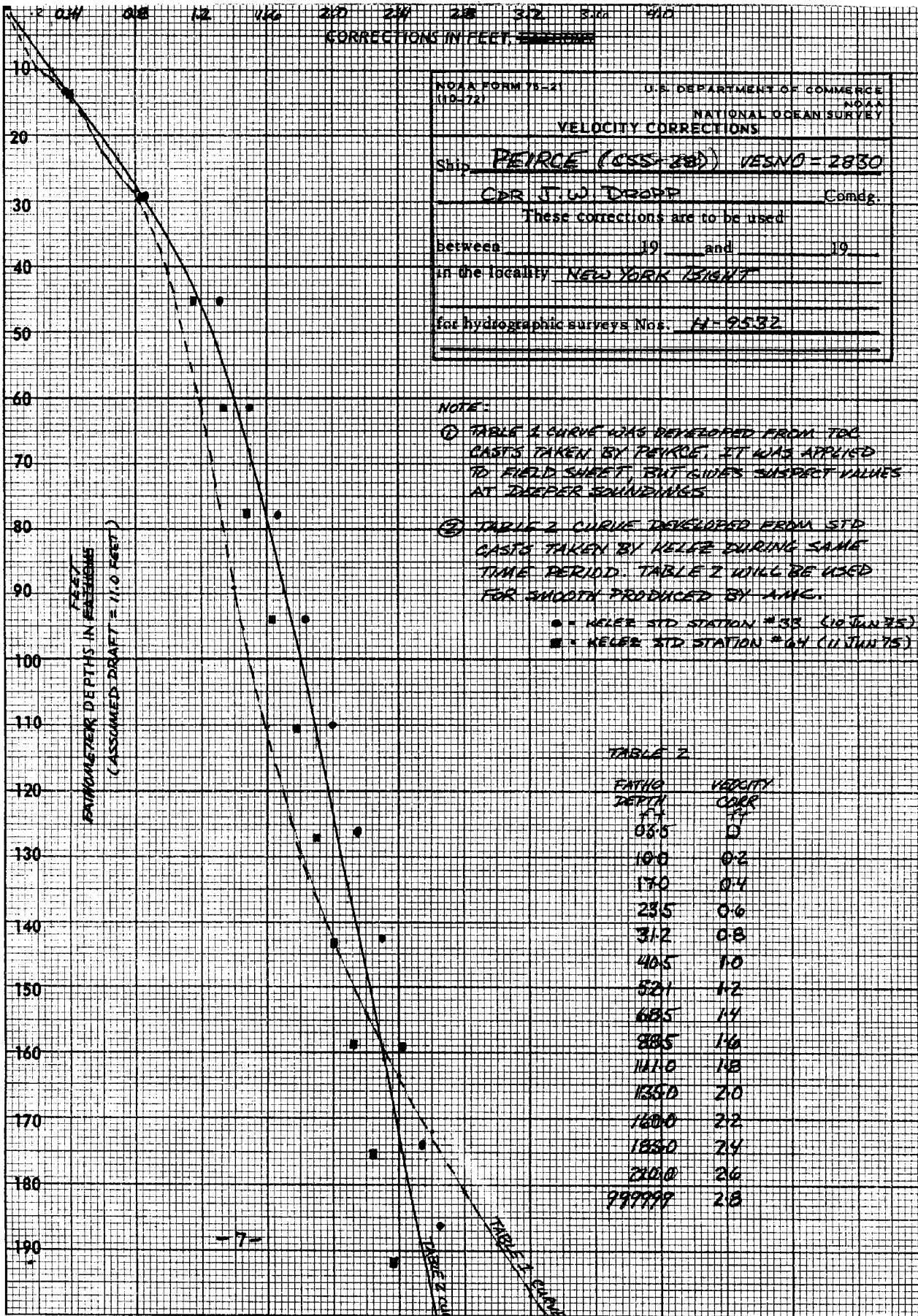
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000132	0	0004				
000225	0	0006				
000285	0	0008				
000410	0	0010				
000601	0	0012				
000890	0	0014				
001102	0	0016				
001300	0	0018				
001430	0	0020				
001540	0	0022				
001638	0	0024				
001720	0	0026				
001810	0	0028				
001895	0	0030				
001970	0	0032				
002050	0	0034				
999999	0	0036				



03-10 MAY, 1975
 08-15 JUNE, 1975
 KELEP

F. 13

(For deep water add a 0 to these figures)



NOAA FORM 11-21 (10-72) U.S. DEPARTMENT OF COMMERCE
 NATIONAL OCEAN SURVEY
VELOCITY CORRECTIONS
 Ship PEIRCE (CSS-28) VESNO-2830
 CDR J. W. DROPP Comdg.
 These corrections are to be used
 Between 19 and 19
 in the locality NEW YORK BIGHT
 for hydrographic surveys Nos. H-9532

NOTE:
 (1) TABLE 2 CURVE WAS DEVELOPED FROM TDC CASTS TAKEN BY PEIRCE. IT WAS APPLIED TO FIELD SHEET BUT GIVES SUSPECT VALUES AT DEEPER SOUNDINGS.
 (2) TABLE 3 CURVE DEVELOPED FROM STD CASTS TAKEN BY KELLER DURING SAME TIME PERIOD. TABLE 3 WILL BE USED FOR SMOOTH PRODUCED BY ANGE.
 ● = KELLER STD STATION #33 (10 JUN 75)
 ■ = KELLER STD STATION #64 (11 JUN 75)

TABLE 2

FATHOM DEPTH	VELOCITY CORR
0.5	0
10.0	0.2
17.0	0.4
23.5	0.6
31.2	0.8
40.5	1.0
52.1	1.2
68.5	1.4
88.5	1.6
111.0	1.8
135.0	2.0
160.0	2.2
185.0	2.4
210.0	2.6
999999	2.8

-7-

Corrections to Echo Soundings Report

PE-80-1-75

H-9532

All soundings were obtained by the Ship PEIRCE using a Ross Model 5000 digital echo sounder S/N C537-1039-5. There were no problems that would seriously affect the accuracy of the soundings obtained.

1. Sound Velocity Corrections

Two velocity tables were prepared for this survey. Table 1 was derived from TDC data and used in preparing the field sheet. A subsequent malfunction of the TDC unit made these values suspect. Other data taken by the NOAA Ship GEORGE B. KELEZ during a NOAA/AOML project in the Bight was obtained. Two STD stations were selected at the eastern and western ends of the survey area (see attached chart section). Table 2 was determined from these two stations and gives more realistic correctors at the greater depths. Tables 1 and 2 are plotted on the attached graph for comparison. The TC/TI tape is written to accept only Table 2 values.

Correctors were obtained using Program RK530. The results were plotted and values scaled off at 0.2 foot intervals.

2. Instrument Corrections

The Ross was maintained at zero initial by its built-in calibration circuitry. No other instrument errors were observed.

3. Direct Comparisons

No corrections were determined by direct comparison (leadline) although infrequently throughout the project leadlines were taken as a check on corrections determined by oceanographic data. Leadline values scattered about the computed usually agreeing to better than one foot. Considering the inaccuracies inherent in deep water direct comparisons, it was felt this provided a sufficient check on the computed corrections.

4. Settlement and Squat

S&S correctors for the ship were determined on 1 April 1974 off Point Comfort, Virginia. Ship speed was recorded in the daily statistics log and the appropriate corrector applied on the TC/TI tape. Speeds varied from 8 to .12 knots.

5. TRA Correctors

The total transducer correction is the sum of draft and S&S corrections (no instrument or initial corrections). The draft was measured before and after each trip and linearly proportioned for each day of the trip. The field sheet was plotted with an assumed 11.0 feet TRA correction (included on corrector tapes). The TC/TI tape shows the difference between the actual corrector and 11.0 feet.

-12
-74

OPR -517-

TRA CORRECTION ABSTRACT

ESSEL PEIRCE CSS-28 SHEET PE-80-1-75 REGISTRY NO. H-9532

Jul. Day	GMT From Time	GMT To Time	Velocity Table ft/fms	Draft	Instru- ment Error Corr.	Initial Corr.	S&S Corr. ft/fms	TRA Corr. ft/fms	Remarks
137	183000	240000		9.7			.8	10.5	+11.0 ft maintained in Hydroplot Controller
138	000001	004656		9.6			.8	10.4	
	004657	005157		9.6			.4	10.0	
	005158	240000		9.6			.8	10.4	
139	000001	040421		9.6			.8	10.0	
	041422	043408		9.6			.4	10.0	
	043439	240000		9.6			.8	10.4	
140	000001	003949		9.5			.8	10.3	
	003950	005039		9.5			.4	9.9	
	005040	240000		9.5			.8	10.3	
141	000001	240000		9.5			.8	10.3	
142	000001	025043		9.4			.8	10.2	
	025044	030223		9.4			.4	9.8	
	030224	084015		9.4			.8	10.2	
148	000001	240000		10.0			.8	10.8	

12
-74

OPR -517

TRA CORRECTION ABSTRACT

ESSEL PEIRCE CSS-28

SHEET PE-80-1-75

REGISTRY NO. H-9532

Jul. Day	GMT From Time	GMT To Time	Velocity Table ft/fms	Draft	Instru- ment Error Corr.	Initial Corr.	S&S Corr.	C. P. ft/fms	Remarks
163	000001	193747		9.9			.8	10.7	
	193857	214106		9.9			.4	10.3	
	214851	232621		9.9			.7	10.6	
	232751	235021		9.9			.5	10.4	
	235556	240000		9.9			.8	10.7	
164	000001	022256		9.9			.8	10.7	
	023031	023352		9.9			.5	10.4	
	023532	205038		9.9			.4	10.3	
	205150	231300		9.9			.8	10.7	
	231846	240000		9.9			.55	10.45	
165	000001	023752		9.8			.55	10.35	
	024600	052853		9.8			.8	10.6	
	053003	082000		9.8			.55	10.35	
	082001	110752		9.8			.8	10.6	
	110753	140323		9.8			.55	10.35	
	141146	240000		9.8			.8	10.6	

-17-

8

12
-74

OPR -517

TRA CORRECTION ABSTRACT

VESSEL PEIRCE CSS-28

SHOT PE-80-1-75

REGISTRY NO. H-9532

Jul. Day	GMT From Time	GMT To Time	Velocity Table ft/fms	Draft	Instrument Error Corr.	Initial Corr.	S&S Corr. ft/fms	TRA Corr. ft/fms	Remarks
166	000001	240000		9.8			.8	10.6	
167	000001	055629		9.7			.8	10.5	

ELECTRONIC CONTROL REPORT H-9532

1. CONTROL STATIONS

Control stations for the entire survey were located at:

Pattern 1:	"BEN"	40°34'58.430"N
		73°52'45.107"W
Pattern 2:	"TIANA"	40°50'13.969"N
		72°29'40.176"W

Both sides were located by Operations Division, AMC, and the abstracts and computations are available there for verification (see attached chart sections).

2. HYDROGRAPHIC POSITION CONTROL

Hydrography was controlled by Raydist operating in the Range-Range mode at a frequency of 3296.495 KHz. Raydist rates were logged on-line via hydroplot system.

The Raydist was calibrated by three-point sextant fixes with check angles on known shore objects. The geodetic position of the shore objects were taken from horizontal control volumes--all at least third order on the North American Datum of 1927. Partial lane correctors for the Raydist were determined at each shore-side calibration using the Hydroplot, program AM 560.

When shoreside calibrations were impractical, the whole lane count was checked at a buoy installed by the PEIRCE. The Buoy was taut-moored with a scope of 0.9 to 1.0. Results of calibrations and passes on the buoy are included with survey records.

4/1/76

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): Sandy Hook, N.J.

Period: May 17 - July 22, 1975

HYDROGRAPHIC SHEET: H-9532

OPR: 517

Locality: New York Bight

Plane of reference (mean ~~lower~~ low water): 2.26 ft.

Height of Mean High Water above Plane of Reference:

Sandy Hook 4.6 ft.

Remarks: Recommended zoning:

	<u>Time correction</u>	<u>Range ratio</u>
4 (1) West of 73° 15'	-40 min.	X0.87
3 (2) 73° 15' to 72° 50'	-45 min.	X0.80
2 (3) 72° 50' to 72° 30'	-45 min.	X0.76
1 (4) East of 72° 30'	-50 min.	X0.70

James R. Hubbard
for Chief, Tides Branch

H-9532

GEOGRAPHIC NAMES

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

Long Island (Title)

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APPROVED

Chas E. Harrington

STAFF GEOGRAPHER -CS1x2

2 Feb 1977

ATLANTIC MARINE CENTER
APPROVAL SHEET
FOR
AUTOMATED SURVEY H- 9532

- 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: 09/03/76

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: 9/28/76

Signed:

W. A. Park

Title: Chief, Processing Division

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-9532
PE-80-1-75

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & smooth PNO, excess overlay		1	BOAT SHEETS (3 parts, mylar)		3 1	
DESCRIPTIVE REPORT		1	OVERLAYS 5 preliminary		5 2	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES	2		2			
CAHIERS	3 with printouts		1			
VOLUMES	1					
BOXES						1-Sawtooth records

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				3317
POSITIONS CHECKED		331		
POSITIONS REVISED		10		
DEPTH SOUNDINGS REVISED		200		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		0		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		0		
JUNCTIONS		16		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		24		
SPECIAL ADJUSTMENTS				
ALL OTHER WORK		183	21	
TOTALS				

PRE-VERIFICATION BY R. Roberson, G. Hendrix, J. Griffin	C. Meekins	BEGINNING DATE 02/12/76	ENDING DATE 06/02/76
VERIFICATION BY L.G. Cram		BEGINNING DATE 06/24/76	ENDING DATE 07/09/76
REVIEW BY Hydrographic Inspection Team (AMC)		BEGINNING DATE 09/17/76	ENDING DATE 09/17/76

Baumgardner
5-2-77 4-115

Quality Control: J.H. Myers 1/31/77 22 hrs. Carpenter 6 hrs 4/14/77
U.S. G.P.O. 1972-769-562/439 REG.#6

REGISTRY NO. H-9532

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-9532

Information for Future Presurvey Reviews

No noteworthy bottom changes have taken place since the prior surveys.

<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>

Present survey depths are greater than 120 feet.

The resurvey cycle is 50 years.

HYDROGRAPHIC INSPECTION TEAM
ATLANTIC MARINE CENTER
HYDROGRAPHIC SURVEY REVIEW

DATE: *Sept 17, 1976*

REGISTRY NO.: H-9532

FIELD NO.: PE-80-1-75

GENERAL LOCALITY and SPECIFIC LOCATION:

New York - New Jersey
New York Bight, Offshore

SURVEYED: April 4, 1975 through June 16, 1975

PROJECT NO.: OPR-517

SCALE: 1:80,000

SOUNDINGS BY: Ross Model 5,000
Fathometer
s/n C-537-1039-5

CONTROL: Raydist

Chief of Party	CDR J.W. Dropp
Surveyed by	LCDR Suloff
.....	LT Jamerson
.....	LTJG Johnson
.....	LTJG Dreves
.....	LTJG Holden
.....	ENS Santarelli
Automated Plot by	Calcomp Plotter #618 (AMC)
Verified and Inked by	L.G. Cram

1. Control and Shoreline

No shoreline is required on this offshore survey.

Control is adequately described in the Descriptive Report.

2. Hydrography

A. Crossings: Depths at crossings are in good agreement,
with minor differences of one to two feet.

B. Depth Curves: The usual depth curves were adequately delineated. A brown curve was applied in a few cases to better delineate shoal areas and to emphasize the bottom contour at the 120 foot curve on the western part of the survey.

C. Low-water Line: There is no low-water line on this sheet.

D. Developments: The development of bottom configuration and investigation of least depths are considered adequate with the exception listed below:

No records were included by surveying vessel for the development stated on page 2, paragraph "L", subparagraph "4" of the Descriptive Report - an investigation of Pre-survey Review Item #8 (dangerous sunken wreck). Four development overlays were made for the Descriptive Report - two on Pre-survey Review Items and two for the "spikes" found on the fathograms during the regular hydrography.

Overlays inserted in survey records.

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:

(a) The development run on PSR #2, a dangerous sunken wreck, latitude 40° 22'N and longitude 72° 20'W, was not indicated on records that the vessel turned in. There is no plot on field sheets, no fathograms, no indication that this development was run, except the paragraph in the Descriptive Report (page 2, paragraph "L-4".) There were two developments that were run on shoal soundings that are not mentioned in the Descriptive Report.

(b) There were no stamps used in the Sounding Volume.

4. Junctions

Junctions were made with eight surveys, as follows: H-9577 (1975), H-9550 (1975), H-9551 (1975) to the north; H-9555 (1975) to the east; H-9548 (1975), H-9574 (1975) to the south; H-9546 (1975), and H-9567 (1975) to the west.

The agreement was good in all areas of junctions.

5. Comparisons

A. Prior Surveys: Comparison was made with the following prior surveys; H-6191 (1936) 1:40,000, H-6192 (1936) 1:120,000, H-6223 (1937) 1:40,000, H-6331 (1938) 1:80,000, and H-6347 (1938) 1:120,000.

The agreement was fair in all of the above surveys. Surveys H-6347 and H-6192 were done in fathoms and the greatest differences were with these surveys, in amounts of eight to ten feet.

B. Contemporary Surveys: No contemporary surveys were compared.

C. Wire Drag Surveys: No wire drag on record at AMC covers the area.

6. Published Charts

#12326, 29th edition, dated September 6, 1975 and #12300, (C&GS 1108), 24th edition, dated April 3, 1976.

A. Hydrography: The hydrography compares well with the charted depths. The comparison was difficult to make due to the scale variance, chart #12300 is at approximately 1:400,000, survey is at 1:80,000.

B. Attention is directed to the following: Two developments were run on "spikes" found on fathograms, in the vicinity of latitude 40° 00' and longitude 73° 10'. There was a 136 foot sounding in 151 feet of water and a 144 foot sounding in 162 feet of water. These appear to agree with charted depths of the area. The development soundings and positions were put in excess level "9" and inserts were made on these developments and included in the Descriptive Report. The shoalest soundings were found on regular line spacing and appear on both overlays and smooth sheet.

136 and 144 are spurious returns and were rejected RAC

Two Pre-survey Review Items were developed. #1 was a Pre-survey Review Item described as an obstruction, P.A. latitude 40° 04.0', longitude 73° 31.0'. The soundings agree with charted depths. Recommend retaining this item, as charted. ~~Item #2 was a~~ sunken wreck, ~~P.A.~~ latitude 40° 08', longitude 73° 22', cleared by 19 fathoms. This was developed and nothing found. Recommend retaining this item.

Wreck cleared by 118 feet on chart 12353.

C. Aids to Navigation: Two floating aids to navigation were located on this survey; Lighted Buoy "HA" and Lighted Buoy "NA." Two buoys appear on Chart 12300, 24th edition, dated April 3, 1976 that were not located by the field survey unit; Lighted Buoy "EB", P.A. latitude 40° 05.0', longitude 72° 57.5' and Buoy "NOAA" (orange), P.A. latitude 39° 52.5', longitude 72° 42.5'.

7. Compliance With Instructions

This survey does comply with the Project Instructions.

8. Additional Field Work

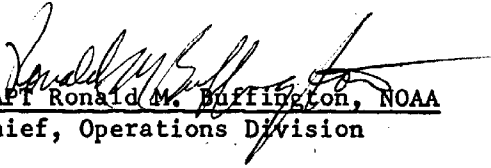
This is a good basic survey. Additional field work is not recommended.

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.

Approval Sheet for H-9532.

Examined and Approved:
Hydrographic Inspection Team
Date: *Sept. 17, 1976*


CAPT Ronald M. Buffington, NOAA
Chief, Operations Division

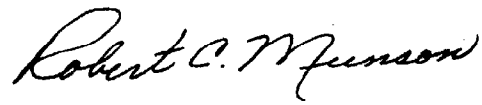

CDR Robert A. Trauschke, NOAA
Chief, Processing Division


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

January 28, 1977

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 for H-9532 (1975), New York-New Jersey,
New York Bight, South of Long Island

A quality control inspection of H-9532 (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, actions by the verifier, 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. Minor revisions to depth curves and soundings were made by the evaluator in order to effect adequate junctions with H-9546 (1975) on the southwest and H-9548 (1975) on the south.
2. A comparison with FE No. 9, 1951 WD which covers a portion of the present survey area was completed during quality evaluation. No conflicts between present depths and effective wire-drag depths were found. Information regarding the charted 118-foot wire-drag clearance depth, hang at 122 feet, and submerged wreck at latitude 40°08.1', longitude 73°21.9' from FE No. 9, 1951 WD were carried forward appropriately to supplement the present survey.
3. The general statement in the Verifier's Report item 5B, Comparisons, that no contemporary surveys were compared, is not required. The only contemporary surveys in this area would be junctional surveys and these had been previously discussed. However, a concluding statement that the present survey is adequate to supersede the prior surveys in the common area would have been appropriate.

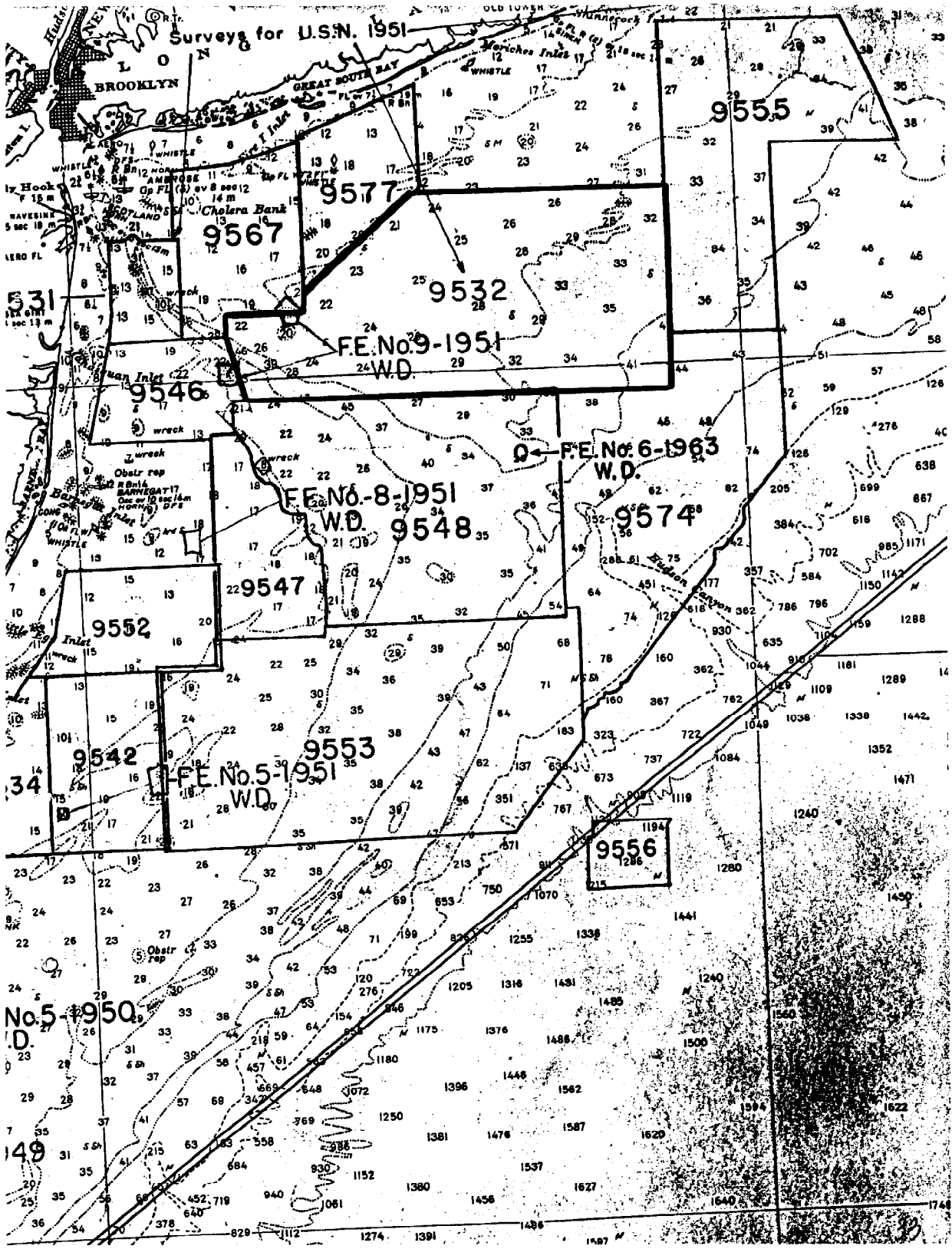


4. A comparison with chart 12353 (1214), latest print date November 6, 1976, was made during quality evaluation. A portion of this 1:80,000-scale chart falls in the same area covered by the present survey and should have been noted in the Verifier's Report.

5. The dangerous submerged, wreck PA charted in latitude 40°22', longitude 72°20', originating with the Navy Wreck List, was not proved or disproved by the present survey and should be retained on the chart.

6. The verifier should have made a comment regarding the adequacy of the survey to supersede the charted information. A comparison between the charts and present survey was made during quality control. With the exception of the obstruction indicated by the verifier and the wreck mentioned above, the present survey is adequate to supersede the charted information in the common area.

cc:
C351



RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. 9532

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.

CHART	DATE	CARTOGRAPHER	REMARKS
1214	5/26/77	J. Pirrone	Full Part Before After Verification Review Inspection Signed Via Drawing No.
1215	8/22/77	Richard L. Hogan	Full Part Before After Verification Review Inspection Signed Via Drawing No. 46
1108	2/22/78	W. Chandler	Full Part Before After Verification Review Inspection Signed Via Drawing No. 47
¹³⁰⁰⁶ 13009	6-13-78	Scott O Heeley	Full Part Before After Verification Review ^{B.C.} Inspection Signed Via Drawing No. 42 APPLIED THRU CHT. 12300(1108) DRWG #47
⁽¹⁰⁰²⁾ 13009	5-28-86	Barbara Loretz	Full Part Before After Verification Review ^{B.C.} Inspection Signed Via Drawing No. #60 Appl thru ch. 13006 DRG #47
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
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