

9450

Diag. Cht. No. 1233-2.

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-40-5-74
Office No. H-9450

LOCALITY

State NORTH CAROLINA
General Locality COBE BANKS
Locality ... APPROACHES TO DRUM INLET

1974

CHIEF OF PARTY
RALPH J. LAND

LIBRARY & ARCHIVES

DATE 3/25/75

☆U.S. GOVERNMENT PRINTING OFFICE: 1974-763-098

Charts

- 419
- 1231
- 1233
- 1109
- 1110
- 1001
- 1000

9450

HYDROGRAPHIC TITLE SHEET

H - 9450

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-40-5-74

State North Carolina

General locality Core Banks

Locality ~~Swash Inlet to Eight Miles South of Drum Inlet~~
Approaches to

Scale 1:40,000 Date of survey 24 - 30 June 1974

Instructions dated 13 November 1973 Project No. OPR-437-PE-74

Vessel NOAA Ship PEIRCE CSS-28

Chief of party Commander Ralph J. Land
CDR R.J. Land, LCDR J.K. Callahan, LT D.L. Suloff,
Surveyed by LTJG J.M. Barnhill, LTJG P.D. Harman, ENS K.M. Holden,
ENS C.D. Mason, ENS B.B. Johnson

Soundings taken by echo sounder, hand lead, pole Ross 200-A S/N C-537-1039-5

Graphic record scaled by Hydroplot System and Ship's Personnel

Graphic record checked by Ship's Officers and Survey Personnel

Protracted by Hydroplot System Automated plot by ~~NOAA Ship PEIRCE~~
AMC-Calcomp 618.

Soundings ~~plotted~~ ^{inked} by Hydroplot System
XXXXXX

Soundings in ~~XXXX~~ ^{XXXX} feet at MLW ~~XXXX~~ ^{XXXX}

REMARKS: All times are in Greenwich Mean Time, 000 W

*Applied to stds 4/22/75
CAB.*

DESCRIPTIVE REPORT

OPR-437-PE-74

PE-40-5-74

A. PROJECT

This survey is an integral part of Project SCOPE conducted in accordance with Project SCOPE Instructions, OPR-437-PE-74 Coast of North Carolina, dated 13 November 1973. There was one change to these instructions: Change No. 1 to Project Instructions OPR-437-PE-74, Coast of North Carolina, dated 10 December 1973.

B. AREA SURVEYED

PE-40-5-74 lies in the vicinity of Drum Inlet on the Core Banks of North Carolina. It is described as that area bounded on the North by Latitude 34 58N, on the south by Latitude 34 42N, on the east by the sixty (60) foot depth curve, and on the west by the thirty (30) foot depth curve. The surveyed area encompasses an area of approximately seventy (70) square miles.

PE-40-5-74 junctions with H-9060, 1:80,000, 1969 and overlays prior survey H-1457, 1:40,000, 1880. The junction area is at the sixty (60) foot depth curve. *A junction was also effected with H-9451 (1974) on the north.*

C. SOUNDING VESSEL

All soundings were obtained by the NOAA Ship PEIRCE.

D. SOUNDING EQUIPMENT

A Ross Model 5000, S/N C-537-1039-5, fathometer was utilized in obtaining all soundings. It was constantly maintained using its built in calibration circuitry and no problems that occurred would affect the accuracy of the soundings. Depths encountered ranged from ~~24~~ feet to ~~68~~ feet. All soundings were in feet and tenths of feet.

Corrections to echo soundings were calculated and are discussed in the attached Corrections to Echo Soundings Report.

E. SMOOTH SHEET

All field records were sent to the Atlantic Marine Center for smooth plotting.

F. CONTROL

Horizontal control for this survey was Raydist operating in the Range/Range mode at a frequency of 3296.400 KHz. For further details see the attached Electronic Control Report.

G. SHORELINE

There is no shoreline within the survey limits.

H. CROSSLINES

Crosslines constituted approximately four (4) per cent of the total miles of hydrography and the depths were in excellent agreement with those of the regular line depths. The agreement between depths was generally one foot.

I. JUNCTIONS

The eastern limit of the survey area was a junction with H-9060, 1:80,000, 1969 at the sixty foot depth curve. Comparison at the junction was in good agreement with the following exceptions:
A junction with H-9451 (1974) on the north was also effected.

PE-40-5-74 <i>Smooth Sheet</i> Depth	H-9060 (1969) <i>Smooth Sheet</i> Depth	Latitude <i>(Approximate)</i>	Longitude
32 ft	50 ft	34 42.8N	76 20.0W
38 45	46	34 48.3	76 19.5
50 55	57 56	34 42.4	76 22.1
52 49	60 50	34 46.9	76 19.3
53 47	48 46	34 42.3	76 23.0
55	60 50	34 44.0	76 21.8
56 55	64 54	34 45.5	76 20.3
56 57	61 57	34 55.5	76 07.0

J. COMPARISON WITH PRIOR SURVEYS

A comparison with prior survey H-1457, 1:40,000, 1880 was made and the results of that comparison was that the depths were in excellent agreement. The agreement varied by one to two feet. The following exceptions were noted.

A comparison was also made with H-885 (1865) and H-538 (1856). There are only minor differences of 1 to 2 feet between prior and present depths

PE-40-5-74 H-1457

Final Depth	Depth	Latitude	Longitude
38.41 ft	35	34 57.9N	76 08.4W
42.43	36	34 45.8	76 22.7
40	51	34 48.2	76 14.9
57.55	62	34 49.6	76 15.5
58.57	61	34 50.4	76 14.9

There were no pre-survey review items on this survey. ✓

K. COMPARISON WITH CHARTS

The depths obtained on this survey were compared with those of C&GS Charts 1233, 1:80,000, March 19, 1974, Twentieth Edition and 419, 1:40,000, September 1, 1973, Thirteenth Edition. The chart comparison was done primarily with Chart 1233 because it was the only chart which included the entire area. Chart 419 covered only a small portion of the northern end of the survey area. The comparison was good with the following exceptions:

PE-40-5-74 C&GS 1233

Final Depth	Depth	Latitude	Longitude
34.36 ft	42	34 51.8N	76 16.6W
42.43	36	34 45.8	76 22.7
45.43	53	34 50.3	76 17.8

There were no notable exceptions on Chart 419 and thus none tabulated.

L. ADEQUACY OF THE SURVEY

This survey is adequate to supersede prior surveys for charting. ✓

M. AIDS TO NAVIGATION

There was one aid to navigation in the area, a BW Mo(A) buoy located at the mouth of Drum Inlet. The charted position is Latitude 34 50.3N, Longitude 76 18.7W and the detached position was computed to be Latitude 34 50.3N, Longitude 76 18.6W. (See Pos. 77)

N. STATISTICS

Total No. of Positions	1317
Total No. of Hydro Miles	717
Total No. of Crossline Miles	28

Total Square Miles	70
TDC Observations	2
Nansen Casts	1
No. of Bottom Samples	16
Leadline Comparisons	1

O. MISCELLANEOUS

All times are in Greenwich Mean Time (GMT).

On Julian Day 181 there are three raw Master Data Tapes. The high speed punch jammed allowing fix and sounding information for fixes 1073 thru 1077 to be printed out on Teletype 2 but not punched on tape. This necessitated editing a Master Tape for those fixes.

Due to the state of the seas during Hydrographic Operations leadline comparisons over shoal soundings were unobtainable.

Bottom samples were logged using consecutive fix numbers from the same series of position numbers as would have been used while running a regular hydro line. Each bottom sample's data was properly logged on Form 733M.

All developments were plotted at a 1:40,000 scale.

Boatsheets and soundings were plotted and logged by a Hydroplot System in conjunction with a Complot Roll Plotter.

P. RECOMMENDATIONS

It is recommended that this survey be considered adequate for charting purposes and that it supersede prior surveys.

Q. REFERENCES TO REPORTS

References were made to the following reports:

- 1.) Corrections to Echo Soundings Report, PE-40-5-74
- 2.) Electronic Control Report, PE-40-5-74

Respectfully submitted for approval by:

Bruce B. Johnson
 Bruce B. Johnson
 ENS, NOAA

CORRECTIONS
TO
ECHO SOUNDINGS

General

This report covers corrections to echo soundings taken by the NOAA Ship PEIRCE from 24 June 1974 thru 30 June 1974. The corrections apply only to the survey PE-40-5-74.

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

The ship operated with one fathometer: A Ross Model 5000 S/N C-537-1039-5. The fathometer was maintained at zero initial by utilizing it's built in calibration circuitry. There were no problems encountered during the operations that would affect the results of the soundings obtained by the Ross fathometer.

Velocity Corrections

The velocity table is a composite table derived by combining data collected by the NOAA Ship PEIRCE at two oceanographic stations. The stations labeled 1 and 2 were taken at the following locations:

Station 1 Lat 34 55.6N
 Long 76 04.5W

Station 2 Lat 34 57.5N
 Long 76 00.7W

There were two TDC casts and one Nansen casts and from these one velocity table was computed.

TRA Corrections

TRA corrections are a combination of the following:

- 1) Draft
- 2) Initial Variation
- 3) Settlement and Squat

Draft

Draft corrections were obtained by measuring the draft of the ship upon entering and leaving port. The difference was then apportioned in 0.1 ft increments over the entire trip. An abstract of draft is attached to this report.

Initial Variation

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

Settlement and Squat

Determination of settlement and squat for the NOAA Ship PEIRCE took place on 1 April 1974 and the following corrections were derived:

Correction	Throttle Setting
0.0 ft	1's
0.05	2's
0.1	3's
0.2	4's
0.3	5's
0.4	6's
0.55	7's
0.8	8's

An abstract of reduced speed is attached to this report. TRA correctors may be inserted in any one of the following places:

- 1) Hydroplot Controller, appears on master tape
- 2) Corrector Tape
- 3) TC/TI Tape

The total corrections are 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 ft are accounted for on the TC/TI tape.

Attachments to the Velocity Report

- 1) Printout of the TC/TI Tape
- 2) Printout of the Velocity Tape
- 3) Abstract of Draft
- 4) Abstract of Reduced Speed
- 5) Form CAM 3-12
- 6) Leadline Comparison

TC/TI TAPE PRINTOUT

162445	0	0000	0001	175	283000	040574
173046	0	1004				
202209	0	0000				
000001	0	1001	0001	176	283000	040574
072609	0	1005				
085724	0	1001				
175109	0	1002	0000	177	283000	040574
000001	0	1003	0001	178	283000	040574
214446	0	1004	0001	179	283000	040574
223530	0	1008				
000001	0	1008	0001	180	283000	040574
003031	0	1004				
000001	0	1005	0001	181	283000	040574
142915	0	1009				
155810	0	1005				

VELOCITY TABLE PRINTOUT

PE-40-5-74

000063 0 0002 0001 000 283000 040574
000097 0 0004
000143 0 0006
000183 0 0008
000222 0 0010
000253 0 0012
000291 0 0014
000330 0 0016
000369 0 0018
000408 0 0020
000445 0 0022
000485 0 0024
000524 0 0026
000560 0 0028
000599 0 0030
000640 0 0032
000668 0 0034
999999 0 0036

ABSTRACT OF DRAFT

<u>DATE</u>	<u>JULIAN DAY</u>	<u>DRAFT</u>
24 June 1974	175	10.2 ft
25 June 1974	176	10.1
26 June 1974	177	10.0
27 June 1974	178	9.9
28 June 1974	179	9.8
29 June 1974	180	9.8
30 June 1974	181	9.7

ABSTRACT OF REDUCED SPEED

<u>DATE</u>	<u>JULIAN DAY</u>	<u>SPEED</u>	<u>TIME FROM (GMT)</u>	<u>TIME TO (GMT)</u>
24 June 1974	175	8's	162445	173045
		6's	173046	202208
		8's	202209	2400
25 June 1974	176	8's	000001	072608
		6's	072609	085723
		8's	085724	140624
26 June 1974	177	8's	175109	2400
27 June 1974	178	8's	000001	143919
28 June 1974	179	8's	214446	223529
		6's	223530	2400
29 June 1974	180	6's	000001	003030
		8's	003031	2400
30 June 1974	181	8's	000001	142914
		6's	142915	155809
		8's	155810	220434

CAM3-12
2-22-74

OPR 437

TRA CORRECTION ABSTRACT

VESSEL PEIRCE

SHEET PE-40-5-74

REGISTRY NO. H-

Vol.	Jul. Day	GMT From Time	GMT To Time	Velocity Table ft/fms	Draft	Instrument Error Corr.	Initial Corr.	S&S Corr.	TRA Corr. ft/fms	Remarks
1	175	162445	173045		10.2			0.8	11.0	
		173046	202208		10.2			0.4	10.6	
		202209	2400		10.2			0.8	11.0	
1	176	000001	072608		10.1			0.8	10.9	
		072609	085723		10.1			0.4	10.5	
		085724	140624		10.1			0.8	10.9	
1	177	175109	2400		10.0			0.8	10.8	
1	178	000001	143919		9.9			0.8	10.7	
1	179	214446	223529		9.8			0.8	10.6	
		223530	2400		9.8			0.4	10.2	
1	180	000001	003030		9.8			0.4	10.2	
		003031	2400		9.8			0.8	10.6	
1	181	000001	142914		9.7			0.8	10.5	
		142915	155809		9.7			0.4	10.1	
		155810	220434		9.7			0.8	10.5	

LEADLINE COMPARISON
ABSTRACT

SHEET# PE-40-5-74

PROJECT# OPR-437

DAY	TIME	LEAD LINE	FATHO	REMARKS		
180						
		PORT				
		AT RAIL	AT WL	ANALOG	DIGITAL	
		56.6	44.2	32.0	32.0	
		53.3	42.3	30.3	30.1	
		54.8	44.5	31.0	31.0	
		55.9	44.0	31.0	30.9	
		54.2	43.9	30.9	30.9	
		54.96	43.78	31.04	30.98	AVERAGE
						11.18 RAIL TO WATER
		STBD				
		AT RAIL	AT WL	ANALOG	DIGITAL	
		52.0	42.1	30.8	30.1	
		52.5	42.0	30.2	30.4	
		52.2	41.9	29.4	29.6	
		52.0	42.2	30.2	30.2	
		52.2	42.8	30.8	31.2	
		52.18	42.20	30.28	30.30	AVERAGE
						9.98 RAIL TO WATER
		53.57	42.99	30.66	30.64	AVERAGE OF PORT & STBD
						9.8 DRAFT CORR.
						1.54 VEL, CORR.
						42.0 TRUE DEPTH
		10.58				RAIL TO WATER LINE
						42.99 - 42.0 = .99 ft
						looks like Instrumental Corr. should be about +1 ft. Has it been applied <u>YES</u> NO

ELECTRONIC CONTROL REPORT
PE 40-5-74

A. Horizontal Control

Horizontal positioning for the entire survey, positions 1 thru 1317, was established through the use of electronic Raydist operating in the range/range mode at a frequency of 3296.400 KHz.

B. Shore Stations

The shore station locations were as follows:

Pattern I: Harker
Lat. $34^{\circ} 41' 07.465''$ ✓
Long. $76^{\circ} 31' 39.471''$ ✓

Pattern II: Cedar
Lat. $34^{\circ} 57' 18.861''$ ✓
Long. $76^{\circ} 16' 40.908''$ ✓

Station Harker was located at Shell Point on Harkers Island, North Carolina. Station Cedar was located on Cedar Island, North Carolina. Both stations were located by Photo Party 62 using third-order traverse.

C. Calibrations

All calibrations were computed using three-point sextant fixes with check angles to shore signals established by Photo Party 62. All calibration signals were located by third-order traverse. Raydist lane counts were computed using AM 560 and the ship's PDP-8 computer. A calibration consisted of at least four sextant fixes. This was accomplished at least once per working day.

ELECTRONIC CONTROL PARAMETERS

- 1. Project # OPR-437 2. Reg. # H- 9450 3. Field # PE-40-5-74
- 4. Type of Control Raydist Range/Range (Hi-Fix, Raydist, EPI, etc.)
- 5. Frequency 3296.400 (for conversion of electronic lanes to meters)
- 6. Mode of Operation (check one):

Range-Range

Range-Visual

Range One (R₁)
 Station I.D. Harker
 Range Two (R₂)
 Station I.D. Cedar

Lat.	<u>34</u>	<u>41</u>	'	<u>07.465"</u>
Long.	<u>76</u>	<u>31</u>	'	<u>39.471"</u>
Lat.	<u>34</u>	<u>57</u>	'	<u>18.861"</u>
Long.	<u>76</u>	<u>16</u>	'	<u>40.908"</u>

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		To		Position Numbers (inclusive)
	Time	Day	Time	Day	
_____	_____	_____	_____	_____	_____ to _____
_____	_____	_____	_____	_____	_____ to _____
_____	_____	_____	_____	_____	_____ to _____

9. Remarks:

Cedar X= 2,815,500.78
 Y= 449,807.75

Signals are numbered from the South beginning with No. 138

20

CALIBRATION SIGNALS

PE-40-5-74

138	34	52	0909	076	17	4557	16'	ORANGE/LIME TRIPOD
139	34	52	4067	076	16	5873	16'	ORANGE TRIPOD
140	34	53	1208	076	16	3027	50'	BILBY TOWER
141	34	53	1976	076	16	1097	16'	ORANGE/LIME TRIPOD
142	34	53	3951	076	15	3970	16'	ORANGE TRIPOD
143	34	54	1422	076	14	5367	16'	ORANGE/LIME TRIPOD

ALL SIGNALS WERE LOCATED BY PHOTO PARTY 62 USING THIRD-ORDER TRAVERSE.

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 2830

SHEET : PE-40-5-74

TIME	DAY	PATTERN 1	PATTERN 2
162445	175	-00018	-00004
184415		-00014	-00004
000506	176	-00014	-00004
002554		-00014	-00004
012542		-00009	-00005
083042		-00005	-00005
175109	177	-00022	+00012
235830	177	-00022	+00012
000030		-00022	+00012
214446	179	+00003	-00012
000030		+00003	-00012
003541	180	+00003	-00012
131121		+00003	-00012
135049		+00003	-00012
141243		+00003	-00012
144455		-00002	-00014
150646		-00002	-00014
153552		-00002	-00014
175608		-00002	-00014
215033		-00007	-00012
000020	181	-00007	-00012
052618		-00012	-00010
070012	181	-00012	-00010
122901		-00017	-00008
142915		-00017	-00008
155309		-00017	-00008
212756		-00023	-00006

PROJECTION PARAMETERS

POLYCONIC OR MODIFIED TRANSVERSE MERCATOR

- 1. Project No. OPR-437
- 2. Reg. No. H - 9450
- 3. Field No. PE-40-5-74
- 4. Requested By Lt. Suloff
- 5. Ship or Office NOAA Ship REIRCE
- 6. Date Required ASAP

7. Polyconic Modified Transverse Mercator

8. Central Meridian of Projection 76 ° 15 ' 36 "

9. Survey Scale: 1: 40,000

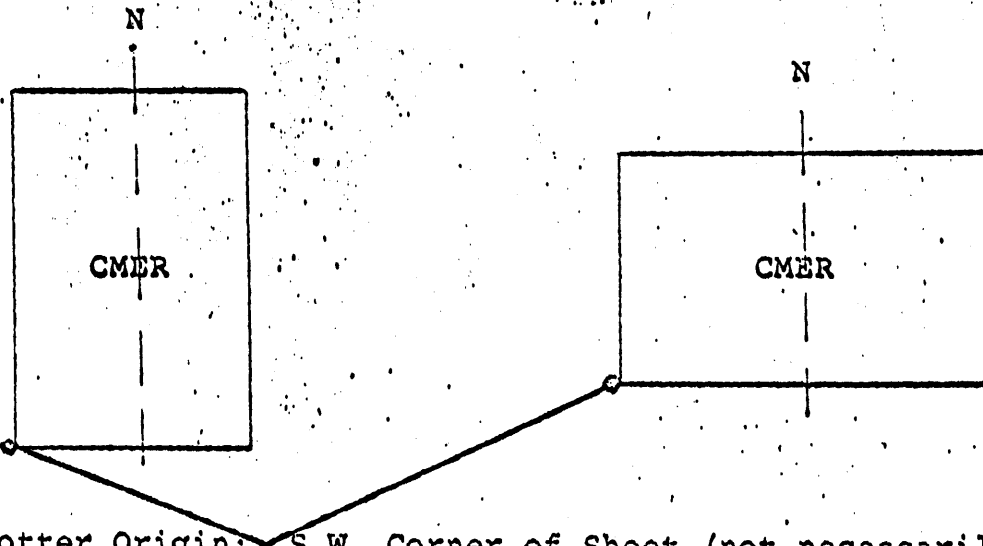
10. Size of Sheet (check one):

36 x 54 36 x 60 Other Specify _____

11. Sheet Orientation (check one):

NYX = 1

NYX = 0



12. Plotter Origin: S.W. Corner of Sheet (not necessarily a grid intersection)
 Latitude 34 ° 40 ' 30 "
 Longitude 76 ° 33 ' 30 "

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

14. Material Desired: Tracing Paper Mylar

Smooth Sheet Other Specify _____

15. Remarks: 2 Copies. Liquid ink on one. Ball point on the other

POSITION DATA SHEET

REGISTRY NO. H-

SHEET PE-40-5-74

LAUNCH PEIRCE

Vol.	Jul. Day	First Pos. NO.	Time (GMT)	Last Pos. NO.	Time (GMT)	Development Positions	Detached Positions	Rejected Positions	Duplicate Positions	Omitted Positions	Bottom Sample
1	175	0001	162445	0036	185824	-	-	-	-	-	-
1	175	0037	190208	0083	233700	-	(2) #76 #77	-	-	-	54,60,61 7 69,75,77 88 89, #97
1	176	0084	235012	0143	033239	-	-	-	-	-	-
1	176	0144	033410	0210	072608	-	-	-	-	-	-
1	176	0211	072609	0272	111421	-	-	1 (#267)	-	-	-
1	176	0273	123252	0302	140654	-	-	-	-	-	-
1	177	0303	175109	0337	194154	-	-	-	-	-	-
1	177	0338	194352	0407	232946	-	-	457	-	-	-
1	178	0408	233207	0457	022748	-	-	-	-	-	-
1	178	0458	053754	0492	073121	-	-	-	-	-	-
1	178	0493	073337	0568	115011	-	-	-	-	-	-
1	178	0569	115306	0614	143919	-	-	615	-	-	-
1	179	616	214446	640	230839	-	-	-	-	-	-
1	180	641	233130	706	034259	-	-	-	-	-	-
1	180	707	034506	768	074123	-	-	-	-	-	-
1	180	769	074507	834	113606	-	-	-	-	-	856, 862, 874 879, 887
1	180	835	113852	888	153055 163532	-	-	-	-	-	-

ATLANTIC MARINE CENTER
 VERIFICATION OF SMOOTH TIDES

SURVEY H-9450

PLANE OF REFERENCE MLW OR MLLW
 TIME MERIDIAN 000
 HEIGHT DATUM ON STAFFS 1. 3.8 2. _____ 3. _____

<u>TIDE STATIONS</u>	<u>POSITION</u>	<u>TYPE GAGE</u>	<u>TIME CORR.</u>		<u>HEIGHT CORR. *</u>	
			<u>H.W.</u>	<u>L.W.</u>	<u>H.W.</u>	<u>L.W.</u>
1. Cape Hatteras Fishing Pier, N.C.	Ø 35° 12'N Y 75° 42'W	Bubbler				
2.	Ø Y					
3.	Ø Y					

HOURLY HRIGHTS FROM ROCKVILLE OFFICE
 FROM FIELD MARIGRAMS

VERIFIED BY: _____

TIDE ZONING NOT APPLICABLE
 BY COMPUTER
 FROM TWO OR MORE GAGES

LIMITS AND DESCRIPTION OF ZONING METHODS

Zone direct on Cape Hatteras.

TIDE CORRECTIONS COMPILED BY COMPUTER
 MANUALLY

VERIFIED BY: RGC
 VERIFIED BY: _____

HEIGHT OF MHW ABOVE PLANE OF REFERENCE 3.8

TIDE CORRECTIONS VERIFIED ON SOUNDING PRINTOUT BY: R. Cram

DATE OF VERIFICATION 27 Sept. 1974

*OR RATIO

EXAMINED & APPROVED

APPROVAL SHEET

PE-40-5-74

H-9450

All field work and processing of data from this hydrographic survey was under my immediate, daily supervision. The boatsheets and all records have been reviewed and are approved by me. This survey is complete and adequate to supersede all prior surveys of this area.



Ralph J. Land
CDR, NOAA
Commanding, NOAA Ship PEIRCE

ATLANTIC MARINE CENTER
APPROVAL SHEET
FOR
AUTOMATED SURVEY H-9450

- 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: 3/13/75

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: 3/13/75

Signed: C. C. C. C.

Title: Chief, Processing Division

9/18/74

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for Form 362

Tide Station Used (NOAA Form 77-12): Cape Hatteras Fishing Pier

Period: June 24 - 30, 1974

HYDROGRAPHIC SHEET: H9450

OPR: 437

Locality: Outer Coast of North Carolina

Plane of reference (mean ~~lower~~ low water): 3.8 ft.

Height of Mean High Water above Plane of Reference is 3.8 ft.

Remarks: Zone direct on Cape Hatteras.

James R. Hubbard

for Chief, Tides Branch

GEOGRAPHIC NAMES

H-9450

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

ATLANTIC OCEAN											1
CORE BANKS											2
DRUM INLET											3
SWASH INLET											4
											5
											6
											7
											8
											9
											10
											11
											12
											13
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											23
											24
											25

Approved
 Chan. E. Harrington
 Staff Geographer
 27 MAY 1975

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-9450

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & 2-Overlays		1	BOAT SHEETS		1	
DESCRIPTIVE REPORT		1	OVERLAYS		3	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1 & P/O.					
VOLUMES	1					
BOXES			1			
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				1317
POSITIONS CHECKED		135		
POSITIONS REVISED		0		
DEPTH SOUNDINGS REVISED		31		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		0		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		0	0	
JUNCTIONS		1	0	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		8	6	
SPECIAL ADJUSTMENTS		0	0	
ALL OTHER WORK		66	29	
TOTALS		75	41	
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY	BEGINNING DATE		ENDING DATE	
Charles Meekins	Aug. 1, 1974		January 6, 1975	
REVIEW BY	BEGINNING DATE		ENDING DATE	
<i>Mark A. Price</i>	July 28, 1975		August 6, 1975	

*Sup. B.K. Meyer 5 hrs 8/14/75
passed cartog. 12/11/75* • U.S. G.P.O. 1972-769-562/439 REG.#6

Reg. No. _____

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

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

CARDS CORRECTED

DATE _____ TIME REQ'D _____ INITIALS _____

REMARKS:

Reg. No. _____

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

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

MAGNETIC TAPE CORRECTED

DATE 8/8/80 TIME REQ'D. _____ INITIALS JHC

REMARKS:

H-9450

Items for Future Presurvey Review

There are no noteworthy changes in the area of the present survey since the time of the prior surveys.

<u>Position</u>	<u>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>
344	0762	2	2	50 years
345	0761	2	2	50 years
345	0762	2	2	50 years
344	0763	2	2	50 years

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

MODIFIED HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9450

FIELD NO. PE-40-5-74

North Carolina, Core Banks, Approaches to Drum Inlet

SURVEYED: June 24 through 30, 1974

SCALE: 1:40,000

PROJECT NO.: OPR-437

SOUNDINGS: Ross 5000 Depth Recorder

CONTROL: Range-Range
Mode (Raydist)

Chief of Party	R. J. Land
Surveyed by	J. M. Barnhill
.....	J. K. Callahan
.....	P. D. Harman
.....	K. M. Holden
.....	B. B. Johnson
.....	C. D. Mason
.....	D. L. Suloff
Automated Plot by	Calcomp 618 (AMC)
Verified and Indexed by	C. Meekins
Reviewed by	M. J. Friese
.....	Date: August 6, 1975
Inspected by	G. K. Myers

1. Control and Shoreline

The origin of control is adequately stated in Part F of the Descriptive Report and in the Electronic Control Report. There is no shoreline that falls within the area of the survey.

2. Hydrography

A. Depths at crossings are in good agreement.

B. The standard depth curves are adequately delineated. A 36-foot depth curve was added to more adequately delineate the bottom configuration.

C. The development of the bottom configuration and the investigation of least depths are considered excellent.

3. Condition of the Survey

The field work, sounding records, smooth plotting, and Descriptive Report are adequate and conform to the Hydrographic Manual supplemented by the Instruction Manual - Automated Hydrographic Surveys. However, the Raydist Brush records were not available at the time of review. Also, a +1.0-foot instrument correction was not applied to the TRA corrector used for this survey.

4. Junctions

An adequate junction was effected with H-9451 (1974) on the north and with H-9060 (1969) on the east. A junction with H-9464 (1974) on the south will be discussed in the review of that survey.

5. Comparison with Prior Surveys

H-1457 (1880), 1:40,000
 H-885 (1865), 1:40,000
 H-538 (1856), 1:40,000

These prior surveys taken together cover the entire area of the present survey. A comparison between prior and present depths indicates no major bottom changes, but a few variable differences of one to two feet. These differences are considered to have been caused by current action and sedimentation.

The present survey portrays the bottom configuration in much greater detail and is adequate to supersede the prior surveys in the common area.

6. Comparison with Chart 1233 (latest print date March 1, 1975)

A. Hydrography

The charted hydrography originates with the previously discussed prior surveys, which require no further consideration. The present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

The charted aid to navigation adequately serves the purpose and marks the feature intended within the common area of the present survey.

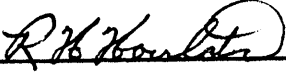
7. Compliance with Project Instructions

The present survey adequately complies with the project instructions.

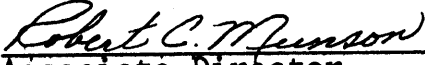
8. Additional Field Work

This is an excellent basic survey and no additional field work is recommended.

Examined and Approved:



Chief
Marine Chart Division

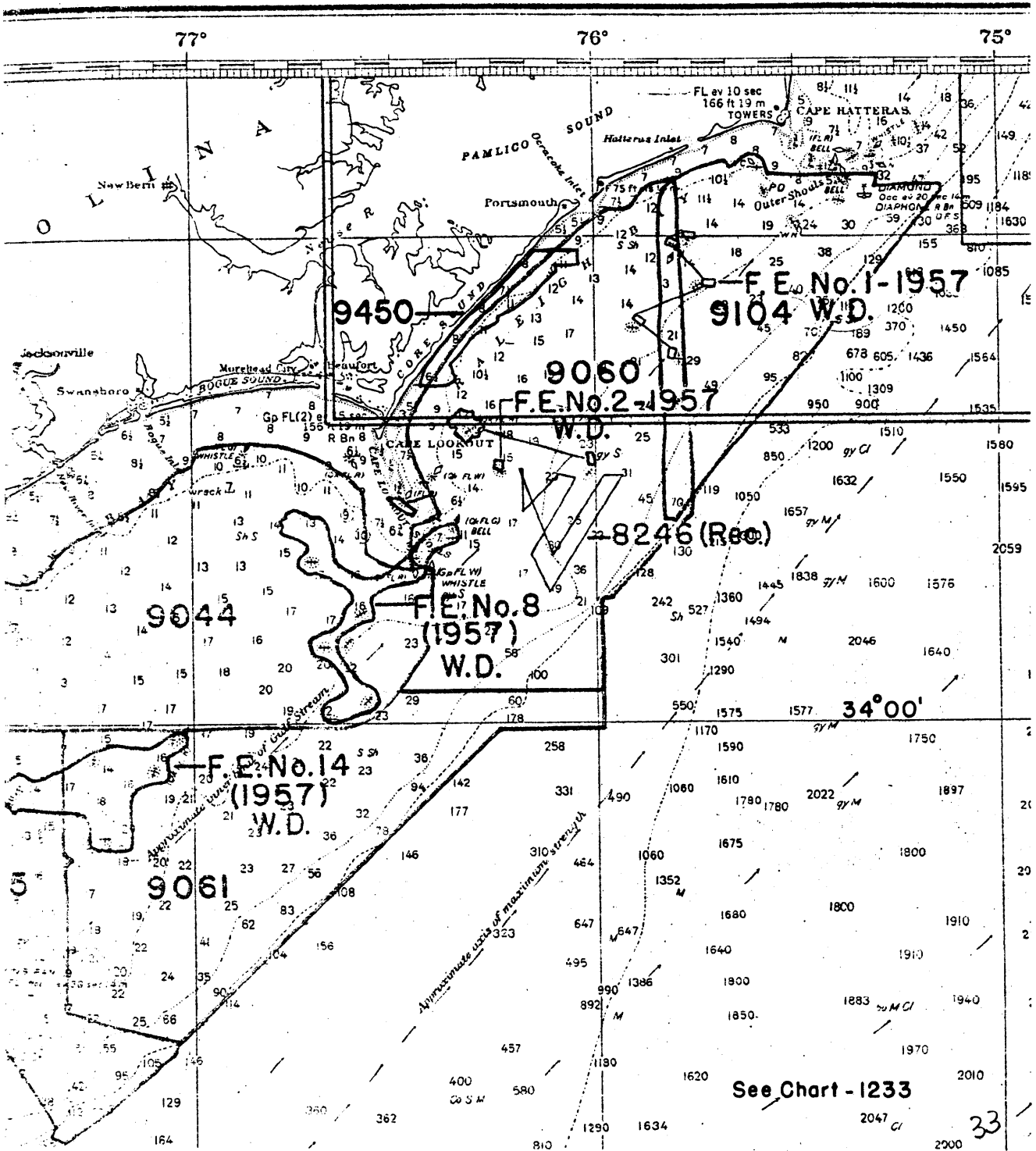


Associate Director
Office of Marine Surveys
and Maps

77°

76°

75°



See Chart - 1233

33

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9450

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
419	4-24-75	D. Harpine	Part Before After Verification Review Inspection Signed Via Drawing No. Exam for Critical Corr. Appd & revised Sdgs & curve (60') curve
1000	4-7-75	D.C. Owen	Part Before After Verification Review Inspection Signed Via Drawing No. revised 10 fm. curve line thru chart 1233.
1233	5-21-75	D. Harpine	Part Before After Verification Review Inspection Signed Via Drawing No. Exam for Critical Corr Remand Sdgs & 30' + 60' curves
1231	5-23-75	D. Harpine	Part Before After Verification Review Inspection Signed Via Drawing No. Exam for Critical Correction No Corr
419 (11530)	1-30-76	Joseph J. Perrine	Full Part Before After Verification Review Inspection Signed Via Drawing No. Fully applied
1233 (11544)	2-3-76	Joseph Perrine	Full Part Before After Verification Review Inspection Signed Via Drawing No. apply thru chart 419
1231 (11548)	11/10/76	Magnus J. Anderson	Full Part Before After Verification Review Inspection Signed Via Drawing No. applied thru chart 1233
1109 (12200)	1/4/77	Richard L. Hogan	Full Part Before After Verification Review Inspection Signed Via Drawing No. THRU CHART 1233
1000 (13003)	6-8-78	R.J. Winfield	Full Part Before After Verification Review Inspection Signed Via Drawing No. 55 EXAM. NO CORR.
11520	11/8/82	Mary H. Hines	Full Part Before After Verification Review Inspection Signed Via Drawing No. 41 Fully appd thru Chart 12200
11009	2-17-83	B. Ferrandous	Full After Verification Review Inspection Signed Via Drawing No. 49 - Fully Appd through Chart 11520