

9434

Diag. Cht. No. 1234-3.

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. AHP-05-4-74
Office No. H-9434

LOCALITY

State North Carolina
General Locality Beaufort Inlet
Locality Offshore of Atlantic Beach

19 74

CHIEF OF PARTY
F. T. Smith

LIBRARY & ARCHIVES

DATE 2-20-75

9434

HYDROGRAPHIC TITLE SHEET

H-9434

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.

AHP-05-4-74

State North Carolina

General locality Beaufort Inlet

Locality Offshore of ATLANTIC BEACH, North Carolina

Scale 1:5000

Date of survey 6-19 June 1974

Instructions dated January 31, 1974

Project No. OPR-513

Atlantic Hydrographic Party
Vessel Launch 1277

Chief of party F. T. Smith

Surveyed by W.A. Wert, F.L. Kleinschmidt, J.S. Bradford, D. Bryant, R.A. Lewis, W. Hill

Soundings taken by echo sounder, ~~BM3143~~ pole _____

Graphic record scaled by Launch Personnel

Graphic record checked by Launch Personnel

Protracted by ~~N/A~~ Calcomp AMC

Automated plot by ⁶¹⁸~~302-23~~ Calcomp AMC

Verification by AMC

Soundings in ~~fathoms~~ feet at MLW ~~NESEW~~

REMARKS: PRINTOUT
TC/TI IS IN BACK OF ACCORDIAN FILE

Applied to stds 3/25/75
CAF

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DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY H-9434 (1974)

AHP-05-4-74, SCALE 1:5,000

OPR 513, BEAUFORT INLET, N.C.

A. PROJECT

OPR-513 is a cooperative agreement between NOS and the U.S. Army Corps of Engineers to provide a new data base for computer studies of the Beaufort Inlet. The survey was accomplished in accordance with Project Instructions OPR-513-AHP-74, Beaufort Inlet, North Carolina, Dated 31 January 1974, and chapter 3 of the Atlantic Marine Center Manual.

B. AREA SURVEYED

The area encompassed by Sheet ^(H-9434, 1974) AHP-05-4-74 is an irregular section extending offshore from Bogue Banks southward to the 30-foot depth curve, off Atlantic Beach, N.C. The approximate limits of this section extend from $076^{\circ} 41' 00'' W$ to $076^{\circ} 44' 50'' W$. junction was made with contemporary surveys: (see Review)

AHP-10-2-74, 1:10000 scale, 1974 (H-9421)

AHP-05-2-74, 1:5000 scale, 1974 (H-9432)

Detailed prior surveys of the area are:

H-856⁴, 1:5,000, 1960

H-7963, 1:12500 scale, 1952-53

All fieldwork was accomplished during the period 6 June 74 to 19 June 74.

C. SOUNDING VESSEL

Launch 1277 was used exclusively to accomplish the survey work on AHP-05-4-74, H-9434 (1974).

D. SOUNDING EQUIPMENT

A Raytheon fathometer model number DE 723D, serial number 1904 was used in Launch 1277. Frequent A-to-F scale checks were taken to monitor stylus arm length. All initial settings were adjusted to zero. A TRA correction of +1.5 feet was determined by drawing the bar check tightly against the transducer and measuring the bar depth. Fathometer soundings were obtained at 2000 RPM. All fathograms were scanned to mean out sea swell action. On the inshore ends of sounding lines, and on shoreline developments, pole soundings were taken. Refer to Velocity and Fathometer Corrector Report, OPR-513, Beaufort Inlet, North Carolina. *Appropriate corrections were applied to plotted depths.*

E. SMOOTH SHEET

Raw master tapes were logged and data plotted on the boatsheet by the Launch's on-board PDP-8/e Hydroplot system. Edited master and corrector tapes, velocity tapes, and TC/TT tape were logged by Launch personnel and submitted for smooth plotting by Processing Division, Atlantic Marine Center.

F. CONTROL *See Review (Conditions of Survey)*

Control for Del Norte hydrography was established utilizing eight separate networks of remote transponders, located over third-order traverse stations: Beaufort Inlet Channel Range Rear Light; Atlantic Beach Stations A, D, E1, and G; and Bogue Banks Stations L, M, M1, and N. Calibration of the Del Norte system was accomplished by three-point sextant fixes using third order triangulations stations and third order traverse stations. Refer to Horizontal Control Report OPR-513, Beaufort Inlet, 1974, and to the enclosed Del Norte Note.

G. SHORELINE

Photogrammetric manuscripts were not available at the time of hydrography, and thus shoreline and topographic details were not transferred to the boatsheet.

The MLW line is not defined by sounding in all areas due to breakers.

The MLW line was transferred from Photogrammetric Bathymetry and Topographic Manuscripts Tp-00516, Tp-00518, and Tp-00520 of 1973-74 to the smooth sheet.

Approximately 9.7 Nautical Miles, or 8% of the hydrography run on Sheet H-9435 (1974) AHP-05-4-74, were crosslines. The agreement with main-scheme hydro was excellent, and all soundings agreed to the nearest foot.

I. JUNCTIONS

H-9421 (1974)
Junction with AHP-10-2-74, was excellent, and all soundings agreed within one foot.

H-9432 (1974)
Junction with AHP-05-2-74, was excellent, and all depth curves from zero to thirty feet could be joined with no displacement.

J. COMPARISON WITH PRIOR SURVEYS See Review Report

Comparison with H-7963, 1:12500 scale, 1952⁻⁵³, showed the contemporary survey soundings to agree at the 30-foot curve. In general, agreement is good (to the nearest foot) at all depths west of $076^{\circ} 42'30''W$, and at depths deeper than 18 feet to the east of this line. In shoal areas east of $076^{\circ} 42'30''W$, there has been considerable change, with large changes in the location of shoals.

Prior survey H-8564, (1952)⁶⁰, which supersedes parts of H-7963, was not available in the field for comparison.

H-9434 (1974)
The only pre-survey review item on sheet AHP-05-4-74, was PSR #14, a sunken wreck charted at $34^{\circ} 41.13'N$, $76^{\circ} 43.32'W$. A detached position (Pos. #1247), a Nun buoy "16" was obtained at the buoy; no indications of the wreck were seen on the Fathogram. A depth of 18 feet and wreck notation originating with H-8247 1955 W.D. was transferred to the present survey smooth sheet.

K. COMPARISON WITH THE CHART

See Review Report

Comparison with Charts C&GS 423 15th Edition(8 Dec. 73) and C&GS 420 42nd Edition(16 Feb. 74) showed the contemporary survey soundings to be in general agreement with the charts at depths greater than 18 feet, but to differ slightly in the details of the shoaler areas. In general, agreement was to the nearest foot in depths greater than 18 feet, and to differ by up to five feet in shoal areas.

L. ADEQUACY OF SURVEY

See Review Report

This survey is complete and considered to be adequate to supersede prior surveys for charting, with the exception of bottom samples, shoreline and topographical features.

M. AIDS TO NAVIGATION

Comparison of the observed floating aids to navigation with Chart No. 423, 15th Edition, December 8, 1973, Chart No. 420, 42nd Edition, February 16, 1974, and Light List Volume I, Atlantic Coast 1974, showed no differences.

N. STATISTICS

<u>Vessel No.</u>	<u>N. Miles of Soundings</u>	<u>Sq. N.Mi. of Soundings</u>	<u>Bottom Samples</u>	<u>No. of Positions</u>
Launch 1277	122.0	3.2	0	1245

O. MISCELLANEOUS

None

P. RECOMMENDATIONS

None

Q. REFERENCES TO REPORTS

1. Fathometer and Velocity Correction Report, OPR-513, Beaufort Inlet, North Carolina. *not available at time of Review.*

2. Horizontal Control Report, OPR-513, Beaufort Inlet, North Carolina.

Not available at time of Review.

Respectfully Submitted

W. A. Wert
LTJG, NOAA

APPROVAL SHEET

SURVEY H-9434(AHP-05-4-74) 1974

The hydrographic records transmitted with this report are complete and adequate. Additional field work remains to be done as indicated in Section L.

F. T. Smith
F. T. Smith
LCDR, NOAA
Chief, AHP

DEL NORTE NOTE

Del Norte electronic positioning equipment, which operates in a Range-
Range mode, was used to control all of the hydrography on Sheet ^{H-9434 (1974)} AHP-05-4-74.
Eight separate networks were used on this sheet, with each shore station
located over established third order traverse stations.

Calibration was established twice daily by three point sextant fixes; all
calibration signals were situated over triangulation or traverse stations
(third order or better). Sextant fix positions were converted to Del Norte
ranges by PDP-8/e computer using the RK561 program.

On any day, the observed difference between the average morning calibration
and the average evening calibration seldom exceeded 5 meters, with a maximum
difference of 7 meters. Daily correctors were determined by averaging all
calibrations taken at the beginning and at the end of the work period. The
mean variation between morning and evening calibrations was 3.6 meters over
the entire period of hydrography.

Performance of the Del Norte System was, in general, good. No malfunctions
of the Del Norte equipment occurred during the time of hydrography on this
sheet.

A problem existed in the hydroplot system which caused loss of the "8"
bit in the least significant digit of Pattern 2; thus all "8's" in this posi-
tion were read as "0's" and all "9's" were read as "1's", and appear so on
both the TTY-2 printout and the master tape. This problem was rectified on
13 June 1974 when the source of the error was finally traced to the Hydroplot
Controller and the proper card substitution was made. (Refer to FaiLog #4883).

During the period in which this problem occurred, all positions affected by this erroneous data transfer were plotted on the boatsheet with an 8-meter displacement from their actual positions. This problem was overcome by visually scanning the boatsheet for out-of-line soundings; all such soundings received an index of 3 on the corrector tape, for smooth plotting by time and course. ✓

ABSTRACT OF EQUIPMENT UTILIZATION

SHORE STATION LOCATIONS(REMOTES)

Julian Days 157-158

I. Unit S/N 252, Directional Antenna on 20' Guyed Pipe

Location: Bogue Banks Station "N"

$34^{\circ} 41' 51.961''\text{N}$, $076^{\circ} 45' 03.391''\text{W}$

II. Unit S/N 181, Directional Antenna on 65' Light Tower

Location: Beaufort Inlet Channel Range Rear Light

$34^{\circ} 42' 52.980''\text{N}$, $076^{\circ} 39' 46.373''\text{W}$

Julian Day 164

I. Unit S/N 188, OMNI Antenna on Tripod

Location: Atlantic Beach(Bogue Banks) Station "D"

$34^{\circ} 41' 45.843''\text{N}$, $076^{\circ} 42' 35.999''\text{W}$

II. Unit S/N 249, OMNI Antenna on 10' Guyed Pipe

Location: Atlantic Beach(Bogue Banks) Station "A"(Ft. Macon
Park Station)

$34^{\circ} 41' 39.911''\text{N}$, $076^{\circ} 40' 56.945''\text{W}$

Julian Day 165, 14:56:10-18:00:00 GMT

I. Unit S/N 188, Directional Antenna on Tripod

Location: Atlantic Beach(Bogue Banks) Station "E1"

$34^{\circ} 41' 48.075''\text{N}$, $076^{\circ} 43' 10.414''\text{W}$

II. Unit S/N 251, Directional Antenna on tripod

Location: Atlantic Beach(Bogue Banks) Station "D"

$34^{\circ} 41' 45.834''\text{N}$, $076^{\circ} 42' 35.999''\text{W}$

ABSTRACT OF EQUIPMENT UTILIZATION(CONTINUED)

Julian Day 165, 18:11:58-End of Day

- I. Unit S/N 251, Directional Antenna on Tripod
Location: Atlantic Beach(Bogue Banks) Station "G"
34°41' 50.291"N, 076° 43' 35.992"W
- II. Unit S/N 188, Directional Antenna on Tripod
Location: Atlantic Beach(Bogue Banks) Station "E1"
(Same as J.D. 165, 14:56: 10-18:00:00)

Julian Day 169

15:03:57 - 17:34:44

- I. Unit S/N 252, Directional Antenna, on Tripod
Location: Bogue Banks Station "L"
34° 41' 51.081"N, 76° 44' 09.949"W
- II. Unit S/N 188, Directional Antenna, on Tripod
Location: Atlantic Beach(Bogue Banks) Station "G"
34° 41' 50.291"N, 076° 43' 35.992"W

17:56:51-18:47:44

- I. Unit S/N 188, Directional Antenna, on Tripod
Location: Bogue Banks Station "M"
34° 41' 52.105"N, 076° 44' 30.558"W
- II. Unit S/N 252: Same as J.D. 169, 15:03:57-17:34:44

19:26:09-19:28:08

- I. Unit S/N 252, Directional Antenna, on Tripod
Location: Bogue Banks Station "M1"
34° 41' 52.041"N, 076° 44' 45.236"W
- II. Unit S/N 188: Same as J.D. 169, 17:56:51-18:47:44

ABSTRACT OF EQUIPMENT UTILIZATION(CONTINUED)

Julian Day 170

16:04:49-16:37:00

I. Unit S/N 188, Directional Antenna, on Tripod

Location: Bogue Banks Station "M1"

34° 41' 52.041"N, 076° 44' 45.236"W

II. Unit S/N 252, Directional Antenna, on Tripod

Location: Bogue Banks Station "M"

34° 41' 52.105"N, 076° 44' 30.558"W

17:39:21-19:46:31

I. Unit S/N 252: Same as J.D. 170, 16:04:49-16:37:00

II. Unit S/N 249, OMNI Antenna, on 10' Guyed Piper

Location: Atlantic Beach(Bogue Banks) Station "A"(Ft. Macon Park Sta.)

34° 41' 39.911" N, 076° 40' 56.945"W

Mobile Transmitter

Unit S/N 162, OMNI Directional Antenna

DMU

Unit S/N 179

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 1277

SHEET : AMP-5-4-74

TIME	DAY	PATTERN 1	PATTERN 2
141733	157	+00000	+00003
145152		+00000	+00003
154229		+00000	+00011
161120		+00000	+00003
171435		+00000	+00011
171442		+00000	+00003
135613	158	+00002	+00002
181133		+00002	+00010
181145		+00002	+00002
165856	164	-00001	+00000
145610	165	+00001	+00004
160611		+00001	+00004
160618		+00001	+00004
181158	165	+00010	+00003
184409		+00010	+00003
184448		+00010	+00003
150357	169	+00006	+00004
175651		+00004	+00006
192609		+00006	+00004
160449	170	+00007	+00007
173921		+00007	+00003

SIGNAL LIST See 12010
 OPR-513
 BEAUFORT INLET, N.C.

001	34	42	5301	076	43	2881	BOGUE SOUND LIGHT 4
002	34	42	4572	076	42	5502	BOGUE SOUND LIGHT 2
003	34	42	1766	076	42	4280	PILING, TRIPLE SSS PIER
004	34	42	0046	076	41	0003	FORT MACON CREEK LIGHT 2
005	34	42	4520	076	41	4774	MOREHEAD CITY CHANNEL LIGHT 23
006	34	41	5703	076	39	5734	BEAUFORT INLET CH. RANGE FRNT LT.
007	34	41	1873	076	39	3099	MOREHEAD CH. RANGE REAR LIGHT
008	34	41	2508	076	37	5798	SHACKLEFORD SLUE JNCT LIGHT "NR"
009	34	42	5298	076	39	4637	BEAUFORT INLET CH. RANGE REAR LT., 1962
010	34	40	3519	076	37	1778	SHACKLEFORD BANKS STATION 10
011	34	40	3175	076	37	0661	SHACKLEFORD BANKS STATION 11
012	34	40	2634	076	36	4908	SHACKLEFORD BANKS STATION 12
013	34	40	2212	076	36	3540	SHACKLEFORD BANKS STATION 13
014	34	41	3991	076	40	5695	BOGUE BANKS STATION A
015	34	41	3984	076	41	1284	BOGUE BANKS STATION A1
016	34	41	3977	076	41	3032	BOGUE BANKS STATION B
017	34	41	4022	076	41	4621	BOGUE BANKS STATION B1
018	34	41	4069	076	42	0275	BOGUE BANKS STATION C
019	34	41	4356	076	42	2127	BOGUE BANKS STATION C1
020	34	41	4583	076	42	3600	BOGUE BANKS STATION D
021	34	41	4637	076	42	5629	BOGUE BANKS STATION E
022	34	41	4808	076	43	1041	BOGUE BANKS STATION E1
023	34	41	4922	076	43	2581	BOGUE BANKS STATION F
024	34	41	5029	076	43	3599	BOGUE BANKS STATION G
025	34	40	3977	076	37	3263	+NEW
026	34	40	4340	076	37	4910	SHACKLEFORD BANKS STATION 1
027	34	40	4546	076	37	5846	SHACKLEFORD BANKS STATION 2
028	34	40	5000	076	38	1903	SHACKLEFORD BANKS STATION 3
029	34	40	5237	076	38	2976	SHACKLEFORD BANKS STATION 4
030	34	43	1473	076	42	5341	*MOREHEAD CTY T&T MICRO TWR (1962)
031	34	43	1637	076	42	3226	*MOREHEAD CTY STANDPIPE (1913)
032	34	42	5143	076	41	1149	*MOREHEAD CTY RADIO WMBL (1962)
033	34	43	0803	076	39	4992	*BEAUFORT MUNI WATER TANK (1927)
034	34	41	5196	076	45	0339	BOGUE BANKS STATION N
035	34	42	1613	076	40	4266	BEAUFORT HARBOR CHANNEL LIGHT 1
036	34	41	5025	076	43	4722	BOGUE BANKS STATION K
037	34	41	5100	076	44	0994	BOGUE BANKS STATION L
038	34	41	5210	076	44	3055	BOGUE BANKS STATION M
039	34	41	5204	076	44	4523	BOGUE BANKS STATION M1
	34	41	4510	076	40	4420	FORT MACON, 1850

THIRD ORDER TRAVERSE
 *THIRD ORDER TRIANGULATION
 +THREE POINT SEXTANT FIX

ATLANTIC MARINE CENTER
ELECTRONIC CONTROL PARAMETERS

- 1. Project # OPR-513 2. Reg. # H-9434 3. Field # AHP-05-4-7A
- 4. Type of Control DEL NORTE (Hi-Fix, Raydist, EPI, etc.)
- 5. Frequency 1498.35 (for conversion of electronic lanes to meters)
- 6. Mode of Operation (check one):

Range-Range

Range-Visual

Range One (R₁)
 Station I.D. BOGUE BANKS "N"
 Range Two (R₂)
 Station I.D. BEAUFORT REAR RANGE

Lat. 34 ° 41 ' 51.961 "
 Long. 076 ° 45 ' 03.391 "
 Lat. 34 ° 42 ' 52.980 "
 Long. 076 ° 39 ' 46.373 "

Hyperbolic (3-station)

Hyper-Visual

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

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=Ø

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	From		To		Position Numbers	
EDP #	Time	Day	Time	Day	(inclusive)	
<u>1277</u>	<u>141733</u>	<u>157</u>	<u>191745</u>	<u>158</u>	<u>1</u>	to <u>554</u>
_____	_____	_____	_____	_____	_____	to _____
_____	_____	_____	_____	_____	_____	to _____

9. Remarks: _____

ATLANTIC MARINE CENTER
ELECTRONIC CONTROL PARAMETERS

1. Project # OPR-513 2. Reg. # H-9434 3. Field # AHP-05-4-74
 4. Type of Control DEL NORTE (Hi-Fix, Raydist, EPI, etc.)
 5. Frequency 1498.35 (for conversion of electronic lanes to meters)
 6. Mode of Operation (check one):

Range-Range

Range One (R₁)
 Station I.D. ATLANTIC BEACH "D"
 Range Two (R₂)
 Station I.D. ATLANTIC BEACH "A"

Range-Visual

Lat.	<u>34</u> °	<u>41</u> '	<u>45.843</u> "
Long.	<u>076</u> °	<u>42</u> '	<u>35.999</u> "
Lat.	<u>34</u> °	<u>41</u> '	<u>39.911</u> "
Long.	<u>076</u> °	<u>40</u> '	<u>56.945</u> "

Hyperbolic (3-station)

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

Hyper-Visual

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		
<u>1277</u>	<u>165856</u>	<u>164</u>	<u>185743</u>	<u>164</u>	<u>555</u>	to <u>671</u>
_____	_____	_____	_____	_____	_____	to _____
_____	_____	_____	_____	_____	_____	to _____

9. Remarks: _____

ATLANTIC MARINE CENTER
ELECTRONIC CONTROL PARAMETERS

1. Project # OPR-513 2. Reg. # H-9434 3. Field # AHP-05-4-74
 4. Type of Control DEL NORTE (Hi-Fix, Raydist, EPI, etc.)
 5. Frequency 1498.35 (for conversion of electronic lanes to meters)
 6. Mode of Operation (check one):

Range-Range

Range-Visual

Range One (R₁)
 Station I.D. ATLANTIC BEACH "E1"
 Range Two (R₂)
 Station I.D. ATLANTIC BEACH "D"

Lat.	<u>34</u> °	<u>41</u> '	<u>48.075</u> "
Long.	<u>076</u> °	<u>43</u> '	<u>10.414</u> "
Lat.	<u>34</u> °	<u>41</u> '	<u>45.834</u> "
Long.	<u>076</u> °	<u>42</u> '	<u>35.999</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	From		To		Position Numbers	
EDP #	Time	Day	Time	Day	(inclusive)	
<u>1277</u>	<u>1456</u>	<u>165</u>	<u>1744</u>	<u>38</u>	<u>672</u>	to <u>805</u>
_____	_____	_____	_____	_____	_____	to _____
_____	_____	_____	_____	_____	_____	to _____

9. Remarks: _____

ATLANTIC MARINE CENTER
ELECTRONIC CONTROL PARAMETERS

1. Project # OPR-513 2. Reg. # H-9434 3. Field # AHP-05-4-74
 4. Type of Control DEL NORTE (Hi-Fix, Raydist, EPI, etc.)
 5. Frequency 1498.35 (for conversion of electronic lanes to meters)
 6. Mode of Operation (check one):

Range-Range

Range One (R₁)
 Station I.D. ATLANTIC BEACH "G"
 Range Two (R₂)
 Station I.D. ATLANTIC BEACH "E1"

Range-Visual

Lat.	<u>34</u> °	<u>41</u> '	<u>50.291</u> "
Long.	<u>076</u> °	<u>43</u> '	<u>35.992</u> "
Lat.	<u>34</u> °	<u>41</u> '	<u>48.075</u> "
Long.	<u>076</u> °	<u>43</u> '	<u>10.414</u> "

Hyperbolic (3-station)

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

Hyper-Visual

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	
<u>1277</u>	<u>181158</u>	<u>165</u>	<u>211208</u>	<u>165</u>	<u>806</u> to <u>901</u>
_____	_____	_____	_____	_____	_____ to _____
_____	_____	_____	_____	_____	_____ to _____

9. Remarks: _____

ATLANTIC MARINE CENTER
ELECTRONIC CONTROL PARAMETERS

1. Project # OPR-513 2. Reg. # H-9434 3. Field # AHP-05-4-74
 4. Type of Control DEL NORTE (Hi-Fix, Raydist, EPI, etc.)
 5. Frequency 1498.35 (for conversion of electronic lanes to meters)
 6. Mode of Operation (check one):

Range-Range

Range-Visual

Range One (R₁)
 Station I.D. BOGUE BANKS "L"
 Range Two (R₂)
 Station I.D. BOGUE BANKS "G"

Lat. 34 ° 41 ' 51.081 "
 Long. 076 ° 44 ' 09.949 "
 Lat. 34 ° 41 ' 50.291 "
 Long. 076 ° 43 ' 35.992 "

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=β

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		
<u>1277</u>	<u>150357</u>	<u>169</u>	<u>173444</u>	<u>169</u>	<u>672</u>	to <u>791</u>
_____	_____	_____	_____	_____	_____	to _____
_____	_____	_____	_____	_____	_____	to _____

9. Remarks: _____

ATLANTIC MARINE CENTER
ELECTRONIC CONTROL PARAMETERS

1. Project # OPR-513 2. Reg. # H-9434 3. Field # AHP-05-4-74
 4. Type of Control DEL NORTE (Hi-Fix, Raydist, EPI, etc.)
 5. Frequency 1498.35 (for conversion of electronic lanes to meters)
 6. Mode of Operation (check one):

Range-Range

Range-Visual

Range One (R₁)
 Station I.D. BOGUE BANKS "M"
 Range Two (R₂)
 Station I.D. BOGUE BANKS "L"

Lat. 34 ° 41 ' 52.105 "
 Long. 076 ° 44 ' 30.558 "
 Lat. 34 ° 41 ' 51.081 "
 Long. 076 ° 44 ' 09.949 "

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		
<u>1277</u>	<u>175651</u>	<u>169</u>	<u>184744</u>	<u>169</u>	<u>792</u>	to <u>839</u>
_____	_____	_____	_____	_____	_____	to _____
_____	_____	_____	_____	_____	_____	to _____

9. Remarks: _____

ATLANTIC MARINE CENTER
ELECTRONIC CONTROL PARAMETERS

1. Project # OPR-513 2. Reg. # H-9434 3. Field # AHP-05-4-74
 4. Type of Control DEL NORTE (Hi-Fix, Raydist, EPI, etc.)
 5. Frequency 1498.35 (for conversion of electronic lanes to meters)
 6. Mode of Operation (check one):

Range-Range

Range-Visual

Range One (R₁)
 Station I.D. BOGUE BANKS "M1"
 Range Two (R₂)
 Station I.D. BOGUE BANKS "M"

Lat.	<u>34</u> °	<u>41</u> '	<u>52.041</u> "
Long.	<u>076</u> °	<u>44</u> '	<u>45.236</u> "
Lat.	<u>34</u> °	<u>41</u> '	<u>52.105</u> "
Long.	<u>076</u> °	<u>44</u> '	<u>30.558</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=β

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	
<u>1277</u>	<u>192609</u>	<u>169</u>	<u>192808</u>	<u>169</u>	<u>840</u> to <u>842</u>
<u>1277</u>	<u>160449</u>	<u>170</u>	<u>163700</u>	<u>169</u>	<u>1073</u> to <u>1104</u>
				<u>170</u>	to

9. Remarks: _____

ATLANTIC MARINE CENTER
ELECTRONIC CONTROL PARAMETERS

- 1. Project # OPR-513 2. Reg. # H-9434 3. Field # AHP-05-4-74
- 4. Type of Control DEL NORTE (Hi-Fix, Raydist, EPI, etc.)
- 5. Frequency 1498.35 (for conversion of electronic lanes to meters)
- 6. Mode of Operation (check one):

Range-Range

Range-Visual

Range One (R₁)
 Station I.D. ROGUE BANKS "M"
 Range Two (R₂)
 Station I.D. ATLANTIC BEACH "A"

Lat. 34 ° 41 ' 52.105 "
 Long. 076 ° 44 ' 30.558 "
 Lat. 34 ° 41 ' 39.911 "
 Long. 076 ° 40 ' 56.945 "

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	From		To		Position Numbers
EDP #	Time	Day	Time	Day	(inclusive)
<u>1277</u>	<u>17394</u>	<u>170</u>	<u>19539</u>	<u>170</u>	<u>1105</u> to <u>1247</u>
_____	_____	_____	_____	_____	to _____
_____	_____	_____	_____	_____	to _____

9. Remarks: _____

PROJECTION PARAMETERS

POLYCONIC OR MODIFIED TRANSVERSE MERCATOR

1. Project No. OPR-513 4. Requested By Verification Branch
 2. Reg. No. H-9434 5. Ship or Office AMC
 3. Field No. AHP-05-04-74 6. Date Required ASAP

7. Polyconic Modified Transverse Mercator

8. Central Meridian of Projection 76 ° 40 ' 00 "

9. Survey Scale: 1: 5,000

10. Size of Sheet (check one):

30 x 54 36 x 60 Other Specify _____

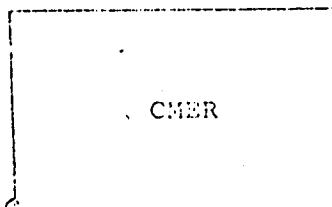
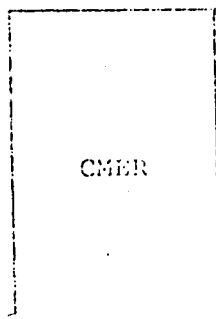
11. Sheet Orientation (check one):

NYX = 1

NYX = β

N

N



12. Plotter Origin: S.W. Corner of Sheet (not necessarily a grid intersection)

Latitude 34 ° 39 ' 42 "

Longitude 076 ° 45 ' 05 "

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

14. Material Desired: Tracing Paper Mylar

Smooth Sheet Other Specify _____

15. Remarks: _____

H-9434

FATHOMETER AND VELOCITY
CORRECTION REPORT OPR-513

APRIL-JUNE 1974

A. EQUIPMENT

A Raytheon Fathometer, model number DE 723 D, serial number 1904 was used in Launch 1277. A TRA correction of +1.5 feet was determined by drawing the bar check tightly against the transducer and measuring the bar depth. Frequent A to F scale checks were taken to check stylus arm length. All initial settings were adjusted to zero. The fathometer would not sound in depths less than 3.7 feet and therefore pole soundings were necessary in shoal water. This problem was corrected by M. J. Ward of EED, however the fathometer will not digitize in depths less than 7 feet. Additional work should be performed.

B. VELOCITY AND INSTRUMENT ERROR CORRECTORS

Depth corrections were obtained by averaging all bar check values excluding values which differed by more than 0.4 feet. A graph was constructed and velocity correctors were scaled in accordance with table 2 of the Hydrographic Manual. The values obtained on the five foot bar check were rejected due to the problem cited in Section A. The graph and abstract of corrector values are included with this report.

C. SETTLEMENT AND SQUAT CORRECTORS

Settlement and Squat Correctors were obtained as outlined in Section 5-108 of the Hydrographic Manual. The graph and abstract of corrector values are included with this report.

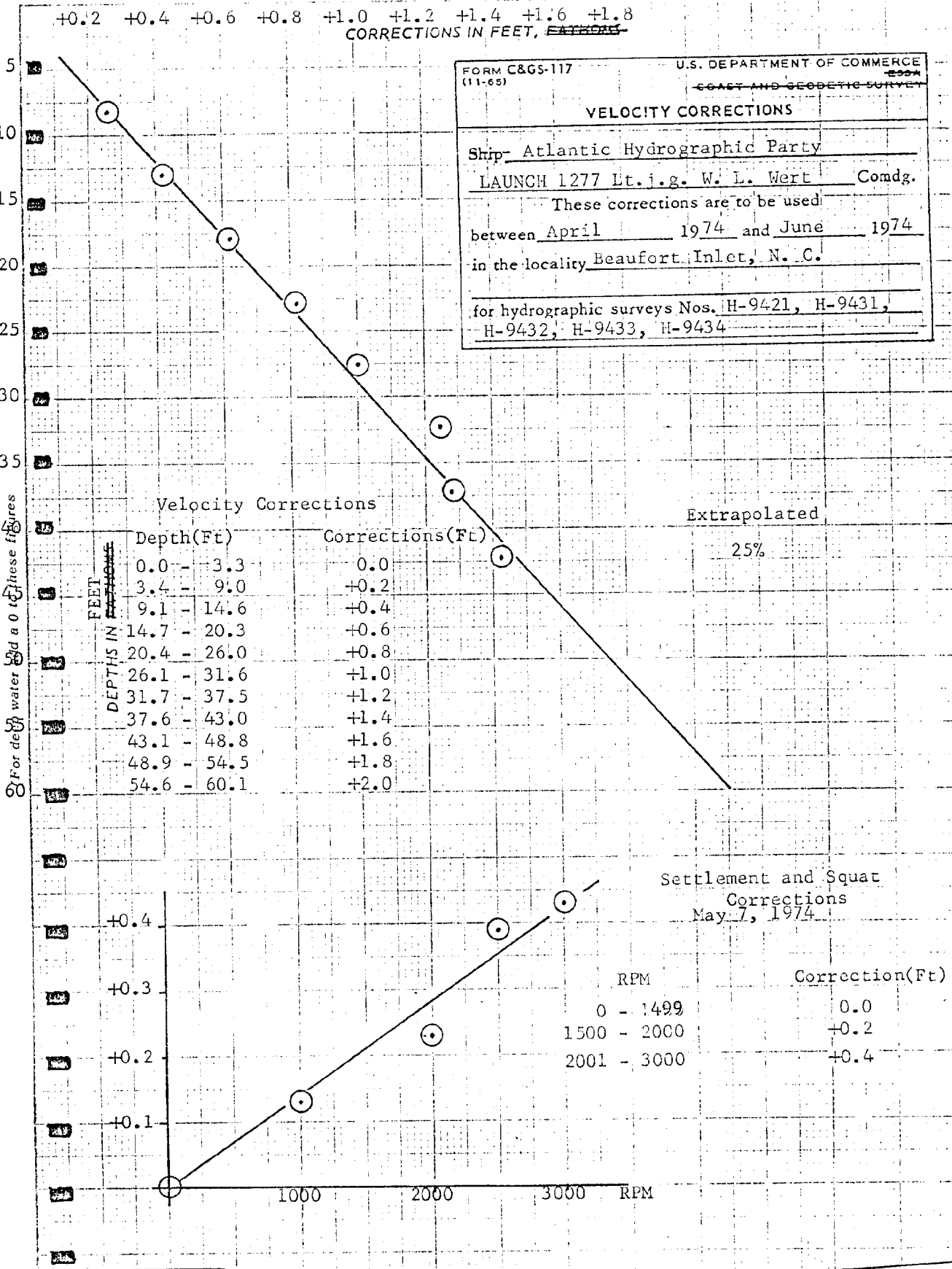
D. MISCELLANEOUS

No appreciable changes in depth corrections occurred between the first and last days of hydrography, therefore bar check data was averaged and one velocity table was constructed which applies to all sounding data obtained during OPR-513.

Respectfully Submitted

William A. Wert
OIC Launch 1277

(Let 1 inch equal 4 fathoms for depth water and 1 inch equal 0.4 fathom for sheet)



20 X 20 TO THE INCH 461 MADE IN U.S.A. 7 X 12 INCHES P. FURFEL & ESSER CO.

For depths of water add a 0 to these figures

APRIL - MAY - JUNE 1974
 BAR CHECK ABSTRACT OPR-513

J.D.	10'	15'	20'	25'	30'	35'	40'	45'
102	+1	+3	+5	+6				
106	+3	+6	+6	+7	+9	+1.0	+1.1	+1.2
107	+2	+4	+6	+6				
108	+4	+6	+8	+1.0	+8	+1.2	+1.4	+1.3
109	+3	+4	+6	+7	+8			
114	+4	+5	+8	+9	+1.3	+1.6	+1.5	+1.8
116	-1	+3	+5					
119	+1	+2	+3	+6	+6	+1.0		
122	+2	+3	+6	+6	+9	+1.0	+1.2	
128	+1	+4	+6	+6	+8			
130	+2	+4	+5	+6	+8	+1.0	+1.2	
133	+3	+4	+6	+7	+1.0	+1.2		
134	+2	+6	+6	+9	+9	+1.2	+1.3	
135	+3	+4	+5	+8	+1.0			
140	+2	+4	+7	+1.0	+1.2	+1.4		
141	+4	+5	+6	+9	+1.0	+1.3		
143	+3	+5	+6	+9	+1.1	+1.4		
144	+4	+5	+7	+1.0	+1.1	+1.2		
148	+3	+5	+6	+8				
155	+2	+3	+6	+8	+9			
157	+2	+3	+6	+8	+1.1			
158	+1	+2	+5	+5	+1.1			
165	+4	+5	+8	+1.0	+1.2	+1.4		
170	+3	+5	+7	+1.0	+1.1	+1.3		
	54	5	149	180	196 ✓	172	77	43
		21	21	23	20	14	6	3
	0.24	0.42	0.60	0.78	0.98	1.23	1.28	1.43

VELOCITY TABLE

H-9434 - AHP-05-4-74

OPR-513 BEAUFORT INLET, N.C.

LAUNCH 1277

<i>Fath. Depth</i>	<i>Corr.</i>	<i>Table *</i>	<i>Vessel</i>	<i>H. No.</i>
000033	0	0000	0001 000	127700 009434
000090	0	0002		
000146	0	0004		
000203	0	0006		
000260	0	0008		
000316	0	0010		
000375	0	0012		
000430	0	0014		
000483	0	0016		
000545	0	0018		
000601	0	0020		
999999	0	0020		

ABSTRACT OF SETTLEMENT & SQUAT

H-9434, AHPOS-4-74

<u>SPEED (RPM)</u>	<u>CORRECTION (FT.)</u>
0-1499	+0.0
1500-2000	+0.2
2001-3000	+0.4

ATLANTIC MARINE CENTER
 VERIFICATION OF SMOOTH TIDES

SURVEY H- 9434

PLANE OF REFERENCE MLW OR MLLW
 TIME MERIDIAN 0.0 GMT
 HEIGHT DATUM ON STAFFS 1. 8.8 2. _____ 3. _____

TIDE STATIONS	POSITION	TYPE GAGE	TIME CORR.		HEIGHT CORR. *	
			H.W.	L.W.	H.W.	L.W.
1. Beaufort Inlet, Channel Range	Ø 34° 42' 52" Y 76° 39' 46"		-15	-15	1.2	Ratio
2.	Ø Y					
3.	Ø Y					

Station location is off smooth sheet of H-9434(1274),

HOURLY HRIGHTS FROM ROCKVILLE OFFICE
 FROM FIELD MARIGRAMS

VERIFIED BY: Rockville

TIDE ZONING NOT APPLICABLE
 BY COMPUTER
 FROM TWO OR MORE GAGES

LIMITS AND DESCRIPTION OF ZONING METHODS

TIDE CORRECTIONS COMPILED BY COMPUTER
 MANUALLY

VERIFIED BY: GFT
 VERIFIED BY: _____

HEIGHT OF MHW ABOVE PLANE OF REFERENCE 8.8

TIDE CORRECTIONS VERIFIED ON SOUNDING PRINTOUT BY: _____

DATE OF VERIFICATION 9/26/74

*OR RATIO

Wd James
 EXAMINED & APPROVED

ATLANTIC MARINE CENTER
APPROVAL SHEET
FOR
AUTOMATED SURVEY H- 9434

- 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: February 14, 1975

Signed: William L. Jonns
William L. Jonns
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: February 14, 1975

Signed: C Dale North Jr
C. Dale North, Jr., LCDR, NOAA
Title: Chief, Processing Division

11/12/74

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

Tide Station Used (NOAA Form 77-12): Beaufort Inlet Channel Range

Period: June 6-June 19, 1974

HYDROGRAPHIC SHEET: H9434

OPR: 513

Locality: Beaufort Inlet, North Carolina

Plane of reference (mean ~~lower~~ low water): 8.8 ft.

Height of Mean High Water above Plane of Reference is 3.8 ft.
(outer coast)

Remarks: Apply the following corrections to
Beaufort Inlet Channel Range for
Atlantic Beach (Ocean).

<u>Time</u>	<u>Corrections</u>	<u>Apply Range Ratio</u>
HW	LW	
-0h 15m	-0h 15m	x1.2 to Channel Range gage.


Chief, Tides Branch

GEOGRAPHIC NAMES

H-9434

Name on Survey	Source of Information											
	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				
ATLANTIC BEACH												1
ATLANTIC OCEAN												2
BEAUFORT INLET												3
BOGUE BANKS												4
MONEY ISLAND BEACH												5
ON SLOW BAY												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25

Approved
 Chas E. Harrington
 Staff Geographer
 31 March 1975

HYDROGRAPHIC SURVEY STATISTICS
HYDROGRAPHIC SURVEY NO. H-9434

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & 2-Overlays ✓		1	BOAT SHEETS 10 sheets of 100000 scale		2 10	
DESCRIPTIVE REPORT		1	OVERLAYS		3	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
TOPOGRAPHIC ENVELOPES	1		1			
CAHIERS	1 ✓		1			
VOLUMES						
BOXES			1 ✓			
T-SHEET PRINTS (List) TP-00516, 00518, 00520 Photobathymetry Sheets						
SPECIAL REPORTS (List) L not with these records						

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				1245
POSITIONS CHECKED		125	-	
POSITIONS REVISED		5	-	
DEPTH SOUNDINGS REVISED		200	15	
DEPTH SOUNDINGS ERRONEOUSLY SPACED		-	-	
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		-	-	
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		2	4	
JUNCTIONS		8	8	
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		24	8	
SPECIAL ADJUSTMENTS		-	12	
ALL OTHER WORK		68	34	
TOTALS		102	66	
PRE-VERIFICATION BY W. H. Guy, B. J. Stephenson	BEGINNING DATE 7-29-74	ENDING DATE 12-13-74		
VERIFICATION BY B. J. Stephenson	BEGINNING DATE 1-7-75	ENDING DATE 1-8-75		
REVIEW BY R. D. Sanocki	BEGINNING DATE 1 April 1975	ENDING DATE 15 April 1975		

Insp. D. J. Ramesburg 5-15-75 28 hr.

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. H-9434 (1974)

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 12/2/80 TIME REQ'D. _____ INITIALS JAL

REMARKS:

H-9434

Information for Future Presurvey Reviews

The bottom in this area is subject to change due to storms and sediment transport by alongshore currents.

The cleared by 18 wreck charted in lat. 34°41.13', long. 76°43.32' was not investigated on the present survey. It may be desirable to ascertain its condition by a future wire-drag investigation at a convenient time.

<u>Position Index</u>	<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat. Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>
344 0765	5	2	25 years

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9434

FIELD NO. AHP-05-4-74

North Carolina, Beaufort Inlet, Offshore of Atlantic Beach

SURVEYED: June 6 thru June 19, 1974

SCALE: 1:5,000

PROJECT NO.: OPR-513

SOUNDINGS: DE-723D Depth Recorder
and sounding pole

CONTROL: Del Norte
(Range-Range)

Chief of Party F. T. Smith
Surveyed by J. S. Bradford
..... D. M. Bryant
..... W. Hill
..... F. L. Kleinschmidt
..... R. A. Lewis
..... W. A. Wert
Automated Plot by#618 Calcomp (AMC)
Verified and inked by B. J. Stephenson
Reviewed by R. D. Sanocki
..... Date: April 15, 1975
Inspected by D. J. Romesburg

1. Description of the Area

This survey covers an area adjacent to Beaufort Inlet and extends westward alongshore of Atlantic Beach on Bogue Banks to long. 76°44.85'. The approximate offshore limit is the 30-foot depth curve.

The bottom configuration is gently sloping from the inshore areas to maximum survey depths except for sand ridges and irregularities inshore near the beach.

There were no bottom samples taken during this survey; however, prior survey data indicates the bottom to be covered with sand.

2. Control and Shoreline

The control for the survey is adequately given in part F and the Del Norte note on page 9 of the Descriptive Report.

The shoreline originates with Class I, Photogrammetric Bathymetry and Topographic Manuscripts TP-00516, TP-00518, and TP-00520 all of 1973-74 which are subject to correction by final photogrammetric office review.

3. Hydrography

- A. Depths at crossings are in very good agreement.
- B. The usual depth curves were adequately delineated. Depth curves were added in pencil at two-foot intervals to supplement the regular curves.
- C. The development of the bottom configuration and investigation of least depths are considered adequate.

4. Condition of Survey

The survey records, automated plotting, Descriptive Report, and verification are adequate and conform to the requirements of the Hydrographic Manual, as amended by the Instruction Manual - Automated Hydrographic Surveys except as follows:

- A. Bottom samples were not taken as required by section 3.7 of the Project Instructions.
- B. It could not be determined from available survey information whether the third-order traverse stations upon which the Del Norte transponders were located are marked stations.
- C. Within common areas, discrepancies as great as four feet exist between soundings on the present survey and those determined from photobathymetric methods. These differences are probably due to the seasonal variations in the bottom configuration nearshore between the date of the photography and the date of the present survey. Closer coordination of hydrographic survey operations and photographic activities would help alleviate these discrepancies.

5. Junctions

The junction with H-9432 (1974) on the east is discussed in the review of that survey. Adequate junctions were effected with H-9421 (1974) on the south and with H-9427 (1974) on the southwest. There was no contemporary junctional survey to the west; however, the charted depths are in harmony with the survey depths in that area.

Soundings in red were determined by photobathymetric methods using photographs of 11/1973. These soundings were transferred from surveys TP-00516, TP-00518, and TP-00520 and provide supplemental information for unsurveyed areas and areas not adequately surveyed by hydrographic methods.

6. Comparison with Prior Surveys

A.	H-7963 (1952-53)	1:12,500
	H-8564 (1960)	1:5,000
	<u>H-8934 (1967)</u>	<u>1:10,000 (Boat Sheet Bp. 72441)</u>

These surveys, taken together, cover the area of the present survey. A comparison with the present survey reveals minor changes of 2 feet generally in depths offshore of the 12-foot curve. The area inshore of the 12-foot curve is subject to greater change possibly due to wave and current action in this area. In the area southwest of Fort Macon between the foreshore and 18-ft. depths the bottom has undergone considerable change. For example, a sand ridge shown on H-8564 (1960) where the 6 and 3-foot curves extend southwest-erly about 3/4-mile from Beaufort Inlet presently falls in an area of generally uniform slope with depths to fifteen feet. The present sand ridge is only half the size and distance offshore as that shown on the prior survey.

Concrete gun mount foundations and several bottom characteristics were carried forward from H-8564 (1960) to supplement the present survey.

B. H-8247 and W.D. (1955) 1:20,000

No conflicts exist between present depths and the effective depths from wire-drag work on this survey. The cleared by 18 Wk. charted in lat. $34^{\circ}41.13'$, long. $76^{\circ}43.32'$ from the wire-drag work has been carried forward to the present survey.

7. Comparison with Chart 11547, 16th Ed., November 2, 1974
Chart 420, 42nd Ed., February 16, 1974A. Hydrography

The charted hydrography originates with the previously discussed prior surveys which require no further consideration supplemented by partial application of the boatsheet of the present survey.

Presurvey Review Item 14, a cleared by 18 wreck charted in lat. $34^{\circ}41.13'$, long. $76^{\circ}43.32'$ originates with wire-drag operations on survey H-8247 (1955). This item was not disproved by the present survey and should remain as charted.

With the exception noted above, the present survey is adequate to supersede the charted hydrography.

B. Aids to Navigation

The aids to navigation presently charted adequately mark the features intended.


8. Compliance with Instructions

The survey adequately complies with the Project Instructions with the exception noted in section 4A of this review.

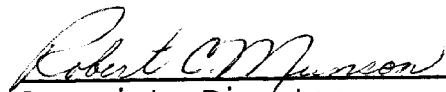
9. Additional Field Work

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

Examined and Approved:

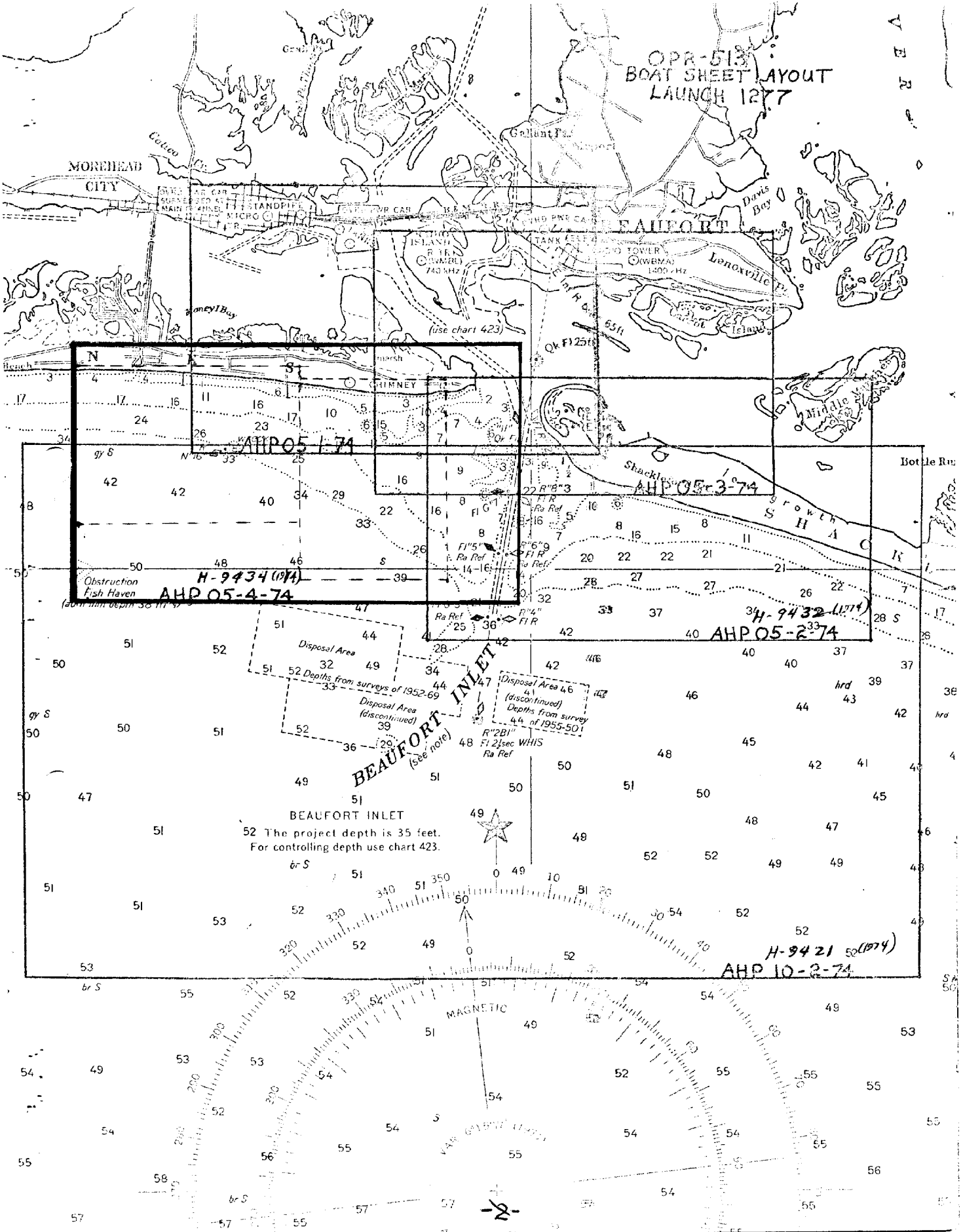


Chief
Marine Chart Division



Associate Director
Office of Marine Surveys
and Maps

OPR-513
BOAT SHEET LAYOUT
LAUNCH 1277



AHP 05-1-74

H-9434 (1974)
AHP 05-4-74

AHP 05-3-74

H-9432 (1974)
AHP 05-2-74

BEAUFORT INLET
52 The project depth is 35 feet.
For controlling depth use chart 423.

H-9421 (1974)
AHP 10-2-74

RECORD OF APPLICATION TO CHARTS

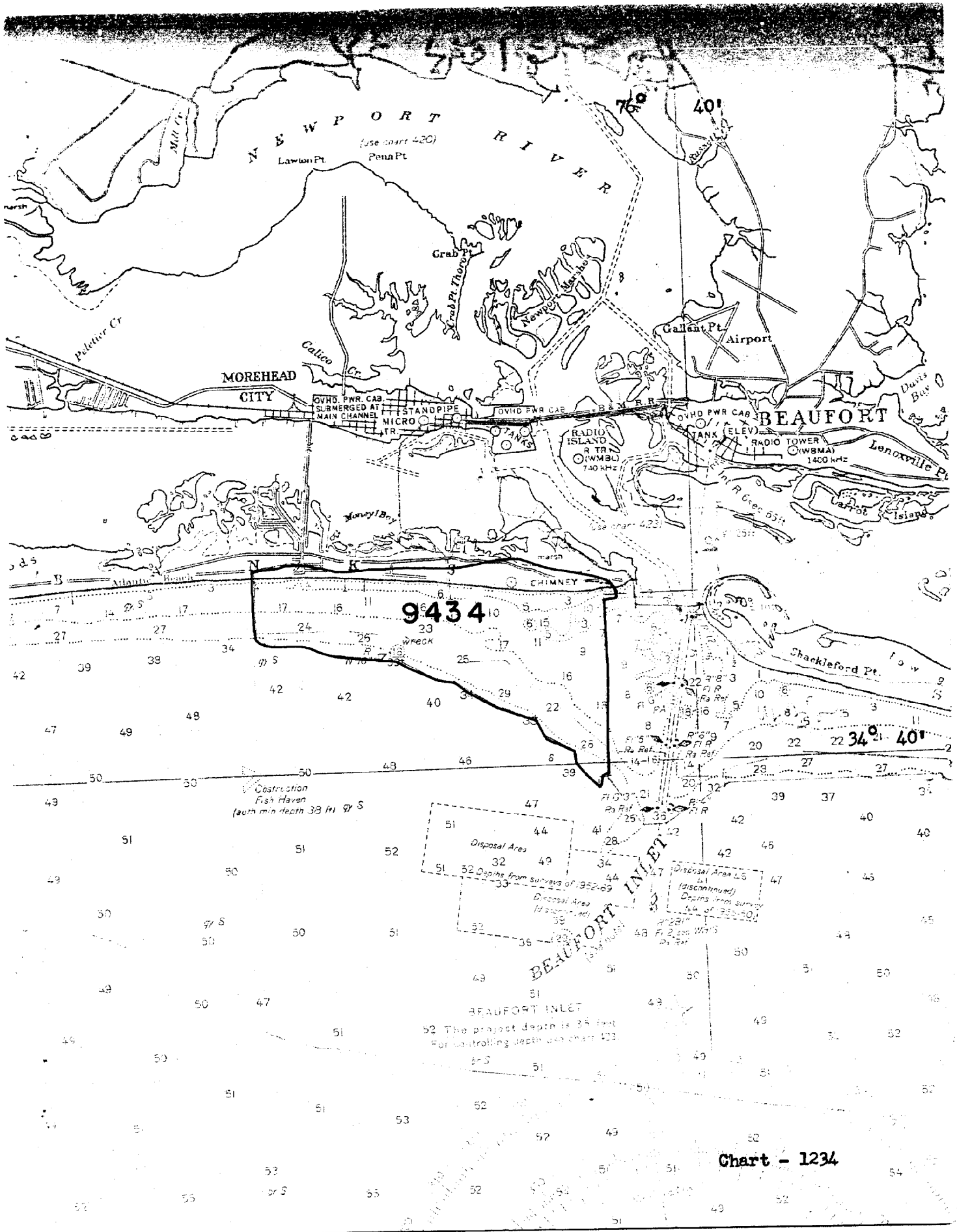
FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9434

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
423	3-26-75	S.S. PERKINS	Part After Verification Inspected Via Drawing No. Examined for critical corrections - revised curves and selected soundings.
420	3-26-75	S.S. PERKINS	Part After Verification Inspected Via Drawing No. Examined for critical corrections - revised curves thru Chart 423
833-SC 420	12-8-75 1/27/76	W. Chandler F.R.W.	Part After Verification Inspected Signed Via Drawing No. Crit corr applied thru Chart 420
420	1/27/76	T.P. Williams	Part After Inspection Review Inspected Signed 420 Drawing No. EXAMINED FOR CRITICAL CORRECTIONS - NO CORRECTIONS MADE AT THIS TIME
423	2-12-76	Richard Allen	Full Part Before After Verification Review Inspection Signed Via Drawing No. FULLY APPLIED
833-SC 420	3/4/76	Richard H. Hogan	Part After Inspection Review Inspected Signed Via Drawing No. EXAM FOR CRITICAL CORR THRU chart 420 No Corr.
420	11-15-76	MIKE PANAS	Full Part Before After Verification Review Inspection Signed Via Drawing No. FULLY APPLIED THRU CHART 423
833SC	12-10-76	Richard H. Hogan	Full Part After Verification Review Inspection Signed Via Drawing No. THRU CHART 420
1233	1/31/76	W. Chandler	Full Part Before After Verification Review Inspection Signed Via Drawing No. thru chart 420 REV RICK
1234	1-10-78	MIKE PANAS	Full Part Before After Verification Review Inspection Signed Via Drawing No. FULLY APPLIED THRU CHARTS #420 & 1233
11547	5-10-81	MARTHA MOLMUD	REAPPLIED SURVEY TO NEW EXTENSION (SCALE 1:12500) DRAWING NO. 30



MOREHEAD CITY

BEAUFORT

9434

BEAUFORT INLET

BEAUFORT INLET

52 The project depth is 35 feet
For controlling depth use chart 123

Chart - 1234