9733

Diag. Cht. No. 1229-2

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. HSB-20-3-77

Office No. H-9733

LOCALITY

State North Carolina

General Locality Pamlico Sound

Locality Long Shoal to Old House Channel

1977-78

CHIEF OF PARTY
William R. Daniels

LIBRARY & ARCHIVES

DATE April 13, 1979

☆U.S. GOV. PRINTING OFFICE: 1976—669-441

Area 2
C&T

1155 1:80,000 Applied

1:80,000 Applied

12205 1:40,000 – 1:80,000 Applied

9733

NOAA FORM 77-28 (11-72) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H-9733

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. HSB-20-3-77

State: North Carolina

General locality: Pamlico Sound

Locality: ~~North End of Pamlico Sound~~ Long Shoal to Old House Channel

Scale: 1;20,000 Date of survey: Nov.21, 1977 to Feb.15,1978

Instructions dated: September 9, 1977 Project No.: OPR-F201-HFP-77

Vessel: Hydrographic Surveys Branch - NOAA Launch 1255

Chief of party: LCDR William R. Daniels

Surveyed by: LT. J. Bennett, Lt.Jg M. Bradley

Soundings taken by echo sounder, ~~hand lead~~, pole

Graphic record scaled by: JHB, MB, DM, FS, JM, SW

Graphic record checked by: JHB & MB

Protracted by: PDP 8/E Automated plot by: field sheet PDP 8/e AMC - CALCOMP 618

Verification by: AMC Verification Branch R.R. Hill

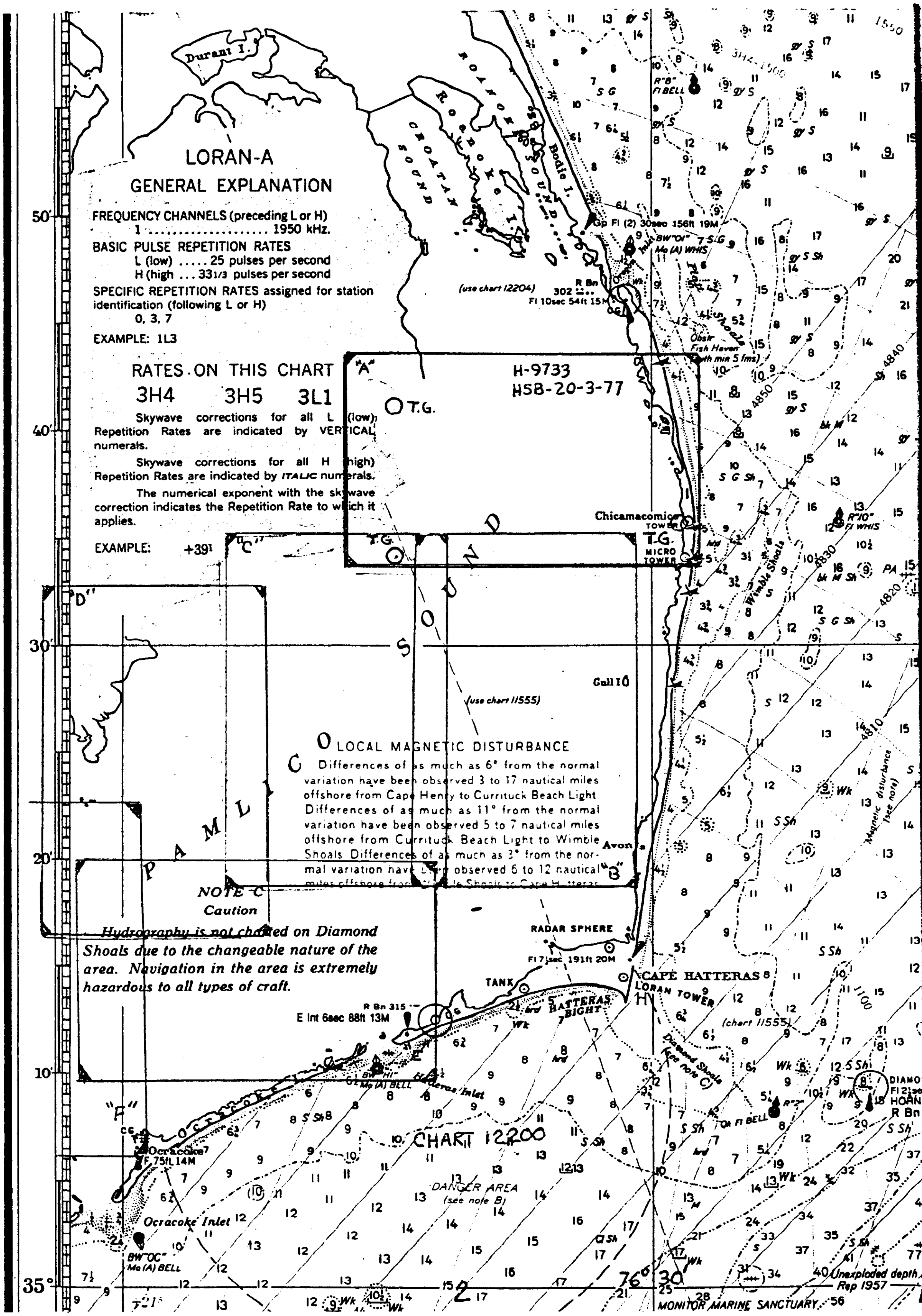
Soundings in ~~fathoms~~ feet at ~~MLW~~ ~~XXXX~~ low water datum

REMARKS:

JHB James Bennett
MB Marcella Bradley
DM Doug Mason
FS Frank Saunders
~~JM~~ Jeff Marlow
SW Steve Weisner

Applied to stds 5-26-79 RC

☆ U.S. GPO: 1974-0-768-081/1207


LORAN-A
GENERAL EXPLANATION
FREQUENCY CHANNELS (preceding L or H)
1 .... 1950 kHz.
BASIC PULSE REPETITION RATES
L (low) ..... 25 pulses per second
H (high ... 33 1/3 pulses per second
SPECIFIC REPETITION RATES assigned for station identification (following L or H)
0, 3, 7
EXAMPLE: 1L3
RATES ON THIS CHART
3H4 3H5 3L1
Skywave corrections for all L (low) Repetition Rates are indicated by VERTICAL numerals.
Skywave corrections for all H (high) Repetition Rates are indicated by ITALIC numerals.
The numerical exponent with the skywave correction indicates the Repetition Rate to which it applies.
EXAMPLE: +39[1]
LOCAL MAGNETIC DISTURBANCE
Differences of as much as 6° from the normal variation have been observed 3 to 17 nautical miles offshore from Cape Henry to Currituck Beach Light. Differences of as much as 11° from the normal variation have been observed 5 to 7 nautical miles offshore from Currituck Beach Light to Wimble Shoals. Differences of as much as 3° from the normal variation have been observed 6 to 12 nautical miles offshore from Wimble Shoals to Cape Hatteras.
NOTE C
Caution
Hydrography is not charted on Diamond Shoals due to the changeable nature of the area. Navigation in the area is extremely hazardous to all types of craft.
H-9733
HSB-20-3-77
"A"
"B"
"C"
"D"
"E"
"F"
T.G.
Durant I.
ROANOKE SOUND
Roanoke I.
CROATAN SOUND
Bodie I.
PAMLICO SOUND
(use chart 12204)
(use chart 11555)
Chicamacomico TOWER
T.G. MICRO TOWER
Wimble Shoals
Avon
RADAR SPHERE
TANK
CAPE HATTERAS
LORAN TOWER
HATTERAS BIGHT
Hatteras Inlet
Diamond Shoals (see note C)
Ocracoke
Ocracoke Inlet
CHART 12200
DANGER AREA (see note B)
Unexploded depth Rep 1957
MONITOR MARINE SANCTUARY
76° 30'
50'
40'
30'
20'
10'
35°

Survey Area And Boat Sheet Layout

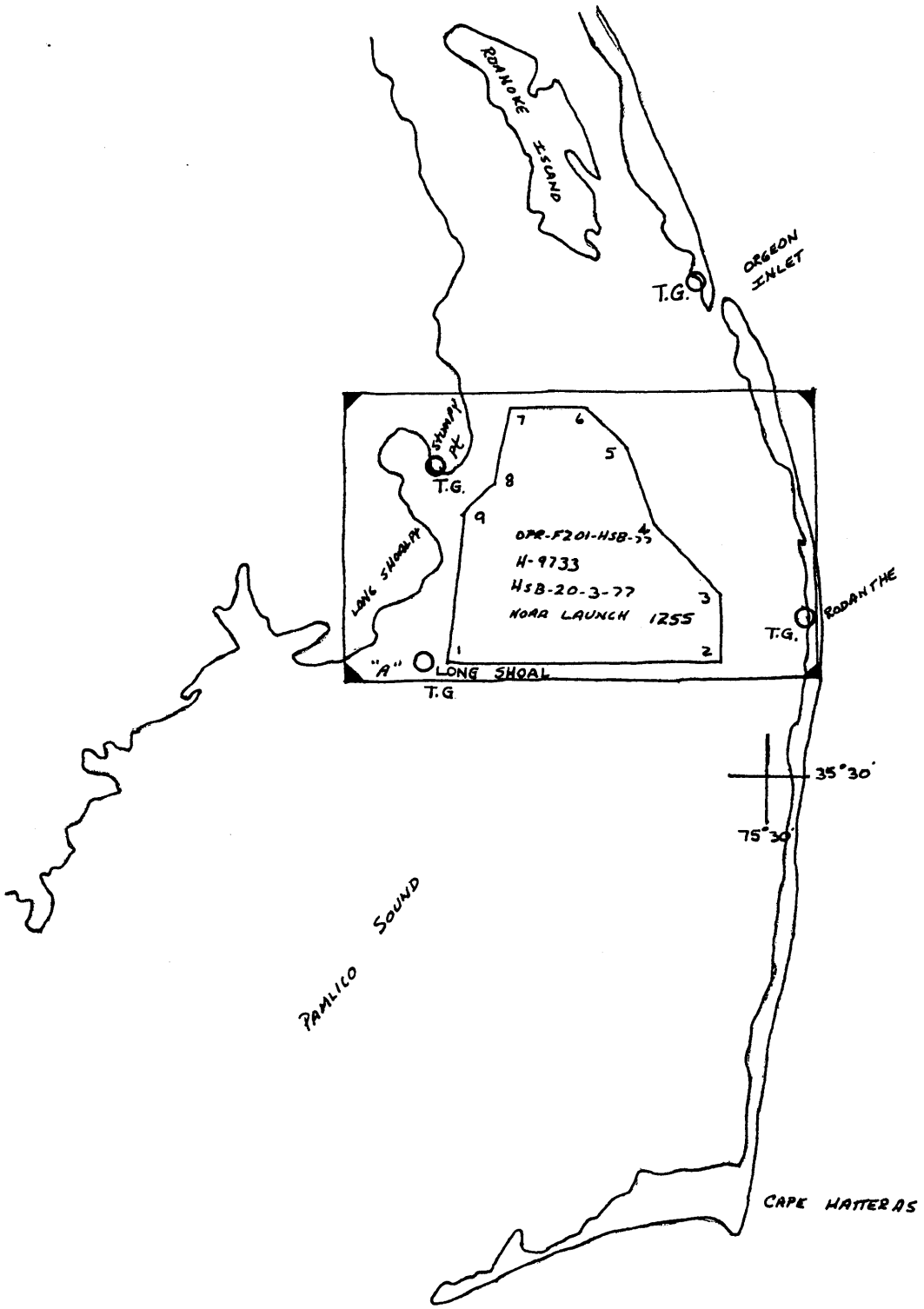


Chart 12200
(formally C&GS 1109)
28nd April 3/76
Scale 1:416,944

JMB

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SURVEY H-9733 (HSB 20-3-77)

Scale: 1:20,000 1977

Vessel: HFP, NOAA Launch 1255 OIC: James Bennett

Chief: William Daniels

A. PROJECT

This project was accomplished under the following project instructions: OPR-F201-HFP-77, Pamlico Sound, North Carolina, 9 September 1977 with the following changes: Change No. 1, 18 October 1977, and Change No. 2, dated 3 November, 1977.

B. AREA SURVEYED

The area emcompassed by the survey was southwest of Oregon Inlet, North Carolina. The following points form the boundaries of the area surveyed:

1. 35°34.0'
   75°44.0'
2. 35°34.0'
   75°32.0'
3. 35°36.0'
   75°32.0'
4. 35°39.0'
   75°35.0'
5. 35°41.0'
   75°36.0'
6. 35°43.0'
   75°37.5'
7. 35°43'
   75°41'
8. 35°40.2'
   75°42.0'
9. 35°39.0'
   75°43.0'

This survey did not extend to the project limits of Latitude 35°45.5' due to the geometry of the control stations. In order to stay within the 30° intersection requirement, the northern limit was terminated at 35°43'.

See the "Survey Area and Boatsheet Layout" sketch. The survey was conducted from November 21, 1977, to February 15, 1978.

C. SOUNDING VESSEL

All hydrography on this survey was obtained by NOAA Launch 1255. In addition, Launch 1280, "Lake Diver" was used to drag for the various presurvey review items. Launch 1280 is a 21-foot Monark powered by an inboard/outboard.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The following Raytheon sounding equipment was used to obtain soundings during the survey:

JD 325-333
ECU: s/n 2781
Digital Depth Monitor: s/n 1045
Recorder: s/n 1279

JD 335
ECU: s/n 37011
Digital Depth Monitor: s/n 1907
Recorder: s/n 37010

The sounding equipment was replaced on JD 335 due to a problem of not getting a proper digitized output. The problem was solved with the equipment change.

Velocity corrections were determined ~~solely~~ by means of bar checks which were taken as frequently as possible, weather permitting. Chain was used for the bar check line which resulted in a zero (0) foot line correction for the entire survey. The chain was measured at the beginning and end of the survey.

The velocity corrections were determined by averaging the digital depths (both up and down) for the various depths. These means were added to the transducer draft to obtain the applicable depth. This value was then compared to the true depth, which is the bar depth plus the line correction (in this survey 0').

Settlement and squat was determined on May 26, 1977, in Buffalo Harbor, New York. It was conducted using the "level method" as explained in the Revised Hydrographic Manual, Section 4.9.4.2. Data from the settlement and squat determinations are included in the Appendix of this report.

The draft (water line to the bottom of the transducer) of Launch 1255 was measured in April, 1977, when the vessel was out of the water for repairs. It was determined to be 2.6 feet and was used for the entire survey.

The fathometers were calibrated and operated according to the manufacturer's specifications. Technicians monitored the fathometers continually during survey operations. When

scanning the fathograms and using any digital-analog correction, it was well annotated on the survey records. There were no problems encountered which would have affected the accuracy of the survey.

E. HYDROGRAPHIC SHEETS

The field sheets were prepared aboard Launch 1255 using the hydroplot system. The survey area was divided into two plotter sheets at Latitude 35°39.6'N. The mainscheme was plotted on one sheet. Bottom samples, D.P.'s, crosslines, and developments were plotted on an overlay to the final field sheet. A development in the vicinity of Latitude 75°38.5'N, Longitude 35°43.0'W was plotted on a separate 1:10,000 scale sheet. The data on the final field sheets has been corrected for velocity, draft, and electronic correctors, at the time the survey was conducted. Verification and smooth plotting will be performed at the Atlantic marine Center, Norfolk, Virginia. Projection and control parameter listings are included in this report.

F. CONTROL STATIONS

The following stations were used for electronic control during the course of the survey:

001 Left (Red) Station: H-2-NC-77 (Rodanthe) (Field pos.)
Latitude 35°35'12.4644"
Longitude 75°28'07.6825"

002 Right (Green) Station: H-3-NC-77 (Avon) (Field pos.)
Latitude 35°21'17.5681"
Longitude 75°30'22.8427"

These stations were located by Operations Division of the Atlantic Marine Center in November 1977. A list of signals and calibration points is included in the Appendix of this report.

G. HYDROGRAPHIC POSITION CONTROL

Control for this survey was the Hastings-Raydist system operating in the range-range mode. No known difficulties were encountered which could have degraded the position accuracy. Launch 1255 used the following equipment:

JD 322-349

Antenna Loading Coil	QB-52B, s/n 120
Transmitter	TA-96B, s/n 87
Navigator	ZA-67A, s/n 59

Frequency used: 3300.400 khz

Antenna Loading Coil QB-52B, s/n 143
Transmitter TA-96B, s/n 85
Navigator ZA-67A, s/n 59
Frequency used: 3300.400 khz

The shore station equipment used was:

Left (RED) Station: (H-2-NC-77)
Transmitted AA-60, s/n 55
Power supply: SA-192, s/n 34
Frequency used: 1650.015 khz
Right (GREEN) Station: (H-3-NC-77)

Transmitter AA-60, s/n 68
Power Supply SA-192, s/n 33
Frequency used: 1650.425 khz

Problems with the launch Raydist equipment was encountered on JD 004 and 012 which resulted in the rejection of the data for those days. After new Raydist equipment was installed on Launch 1255, the Raydist problems were solved. However, numerous "Lane Jump" indications on JD 017 and 018 were caused by a malfunctioning hydroplot controller card which was periodically introducing erroneous rates. The data was corrected by using the "T & C" correction on the corrector tape. This problem was solved by replacing the hydroplot controller card.

Calibration of the raydist system was accomplished by comparing the observed raydist values with the actual values while making passes at the "Old House Channel", Lt. #21 (signal list #003) which was located by the Operations Division of the Atlantic Marine Center. The offset distance from the Raydist antenna to the center of the fixed aid was accounted for by averaging pairs of observed readings taken on opposite sides of the aid. Four values (two pairs) were observed for each calibration. Calibrations were taken before and after hydrography was run each day except when both stations stopped tracking due to thunderstorm actiivity. The morning and afternoon calibrations agreed well indicating this data is adequate to be applied to raw positions throughout the survey. On JD 322, at the beginning of the survey, calibrations were taken throughout the project area and the resultant correctors show that the raydist system is stable throughout the area.

H. SHORELINE

See Q.C. Report

There was no shoreline delineated on this survey.

I. CROSSLINES

Crosslines amounted to 13.2% of the main scheme system of sounding lines. Agreement is excellent with differences averaging one foot or less.

J. JUNCTIONS

There were no contemporary surveys in the area to which junctioning was a requirement. See verifier's Report

K. COMPARISON WITH PRIOR SURVEYS

See verifier's Report

This survey, H-9733, was compared with prior surveys:

H-1363, 1875 to 1877
Scale 1:40,000
Soundings in red

H-4012, 1917
Scale 1:40,000
Soundings in green

The prior surveys agree with the present survey within one to two feet, with the prior surveys being generally shallower.

L. COMPARISON WITH THE CHART See verifier's Report

Comparison of all charted features was made from enlargements of the chart: 12204 (formally C & GS 1229), scale 1:80,000, 22 Edition, February 26, 1977. The soundings are on the final field sheet in blue. Overall, the charted soundings were shallower by two feet. Since no predicted tides or actual water level values were used to plot the present survey, it is believed that the higher water level at this time of year resulted in the difference. It is believed that when smooth water level data is applied, agreement with the chart will be very good.

The following presurvey items were investigated:

PSR ITEM #23 - SUBMERGED PILE 35°34.3' 75°42.15' ✓

The area around the item was covered by a modified trawl sweep using Launch 1280 "Lake Diver". A hang on JD 039, pn 2290, was located at 35°34'23.522", 75°42'14.036". A pole sounding of 12.6 feet was obtained on that day on the obstruction. (See the Sounding Volume, Page 35, for the area covered.) On JD 044, another attempt was made to find a shallower depth and the object was located in the same position but because of rough weather conditions and mechanical trouble with Launch 1280, the search was discontinued. Fathometer depth of 11.7 feet found; least depth not ascertained.

This item was reported ~~from~~ as a previously charted marker which is no longer visible. The marker consisted of seven pilings which were arranged in a triangular shape and was approximately 20 feet on a side. Natural structure AIM

Recommend chart be revised to show ~~12 subm piles as indicated~~ subm piling, as shown on smooth sheet

PSR ITEM #25 - VISIBLE WRECK 35°36.'91" 75°44.'16"

Origin NM 44/57

This visible wreck was located by Launch 1255 on JD 046, pn 2427. The position was determined to be: Lat. 35/36/53.767, Long. 75/44/09.485. The vessel was estimated to be 100-feet long and in relatively good condition. No debris or submerged wreckage was found around the wreck as evidenced by the fathogram trace obtained by Launch 1280 on JD 046 while encircling the wreck. The wreck bares ~~15 feet at MHW.~~ 16 ft above Low Water Datum

Recommend wreck be retained as charted

PSR ITEM #26 - WRECK 35°37.05' 75°41.0'

A modified trawl sweep was used to investigate for the wreck. The area was covered on JD 045 and JD 046 and no hangs were discovered. A 250 meter square was investigated. See JD 046 pn 2423-2426 for the limits of the area covered by the trawl sweep. Local knowledge reports some type of obstruction in the area that nets have become entangled in but no accurate positions could be obtained. It is recommended that this wreck be charted as PA (Position Approximate). Origin NM 33/51

Concur Retain as charted with annotation PA.

PSR ITEM #27 - OBSTRUCTION PA 35°40.0' 75°36.2'

6 Ft. rep. - Marine Corp blimp (Fabric), and one engine cov by 6 ft. of water.

stray This area was first investigated on JD 024 pn 2051-2185. A suspicious trace was found between positions 2090-2091. This trace was investigated on JD 031 pn 2275-2278 and no evidence was found of its existence. This data is not to be plotted. On JD 031 pn 2428-2431 buoys were placed around the area and the area swept with Launch 1280 using a modified trawl sweep. No hangs were obtained and it is assumed that no obstruction is located in this area. A 200-meter square was investigated. However, considering the uncertainty in position it is recommended that this obstruction be charted as it presently is. Local knowledge could neither verify nor disprove the existence of this item. Origin NM 37/57

Concur

DASHED CIRCLE ITEM - 11' sdg 35°43.0' 75°38.5'

This area was investigated on JD 023, pn 1989-2039 at 1100 rpm using 50-meter line spacing on courses 000° and 180°F. Several shoal soundings were found in the area and a least depth of 12.6 feet was found 1-1/2 out of Position 2019, time 183630Z. This sounding and a group of others are approximately .3 mile northeast of charted 11-foot sounding and should be used to update the chart.

Origin H-11809 (1873) 11½ft.

Recommend showing present survey depths in this area.

M. ADEQUACY OF SURVEY

This survey, H-9733 (HSB 20-3-77), is sufficiently complete and adequate to warrant its use to supersede prior surveys for charting.

N. AIDS TO NAVIGATION

The aids to navigation that were in the survey area are:

STUMPY POINT BAY CHANNEL DAY BEACON #"1" (Located on JD 349 pn 1541)	Lat. 35/39/00.909 Long. 75/43/04.822
STUMPY POINT BAY CHANNEL LIGHT #"2" (Located on JD 349 pn 1542)	Lat. 35/39/02.616 Long. 75/43/03.754
OLD HOUSE CHANNEL LIGHT #"21" (Located by Operations of AMC)	Lat. 35/42/59.589 Long. 75/37/42.791
CHICAMACOMICO LIGHT #"1" (Located by Operations of AMC)	Lat. 35/35/57.746 Long. 75/31/15.587

These aids adequately serve the purpose for which they were established and are correctly described in the Light List.

O. STATISTICS

	Launch 1255
Total number of positions	2432
Total N.M. of hydrography	679.8
Square N.M. Of hydrography	69.2
Bottom Samples	40
N.M. Sounding line	558.2
N.M. crossline	73.5
N.M. Development	48.1

P. MISCELLANEOUS

Suspicious traces were found by Launch 1255 and were investigated as follows:

Suspicious trace	Investigated	Note
JD 348 pn 1455-1456	JD 031 pn 2279-2281	No evid. found
JD 348 pn 1483-1484	JD 031 pn 2282-2283	No evid. found
JD 348 pn 1492-1493	JD 031 pn 2284-2286	No evid. found
JD 348 pn 1519-1520	JD 031 pn 2287-2289	No evid. found
JD 024 pn 2090-2091	JD 031 pn 2275-2278	No evid. found

From these investigations, it is assumed that the suspicious traces were caused by fish on or near the bottom. These investigations were not plotted since they added nothing to the survey. See Q.C. Report.

Concur

Several investigations were conducted that resulted in survey data which should not be plotted since it adds nothing to the survey. The printouts and fathograms were kept but the data tapes are not included. The days and positions that were involved are:

JD 024	pn 2051-2121
JD 031	pn 2275-2289
JD 046	pn 2329-2422

O. RECOMMENDATIONS

None

R. AUTOMATED DATA PROCESSING

PROGRAM #	PROGRAM NAME	VERSION DATE
RK111	Range, Range Real Time Plot	1/30/76
RK201	Grid, Signal, & Lattice Plot	4/18/75
RK211	Range, Range Non-real Time Plot	1/15/76
RK300	Utility Computations	2/5/76
RK330	Data Reformat and Check	5/4/76
RK360	Electronic Corrector Abstract	2/2/76
RK407	Geodetic Direct/Inverse	10/23/75
AM602	Elinore	5/20/75

S. REFERENCE TO REPORTS

Horizontal Control Report, Project OPR-F201-HFP-77, submitted by Operations Division, Atlantic Marine Center.

Respectfully submitted,

Robert Lewis

for James H. Bennett, Lt., NOAA
OIC - NOAA Launch 1255

FIELD TIDE OR WATER LEVEL NOTE

Predicted tide corrections were not applied to the sounding data on the final field sheets since Pamlico Sound has a periodic tide of less than one-half foot. Non-periodic water level changes dominate the Sound's water level due to wind setup and rainfall.

ADR water level gages were installed at the following locations:

Site & Number	Location	Period
Stumpy Point #865-2741	Lat. 35°41.36' Long. 75°44.23'	11/14/77 to End of Survey
Rodanthe #865-3215	Lat. 35°35.70' Long. 75°28.22'	11/16/77 to End of Survey
Long Shoal Lt. #865-3305	Lat. 35°33.78' Long. 75°44.11'	11/15/77 to End of Survey
Cedar Island Ferry #865-5151	Lat. 35°01.2' Long. 76°18.6'	11/10/77 End of Project

Contract observers monitored all the gages except for Long Shoal Lt which was monitored by Launch personnel. All records were sent to the Tides and Water Levels Branch, Rockville, Md. All gages operated satisfactorily during the period of the survey.

All gages were leveled at the time of installation and releveled at the time of removal, except for Long Shoal Lt (#865-3305). Cedar Island Ferry (#865-5151) was installed at the beginning of the project and will remain in operation until the project is completed.

VELOCITY TABLE

NOAA LAUNCH 1255

HSB 20-3-77

H-9733

```
001000 0 0000 0001 000 125500 020377
999999 0 0000
```

VELOCITY TABLE

NOAA LAUNCH 1255

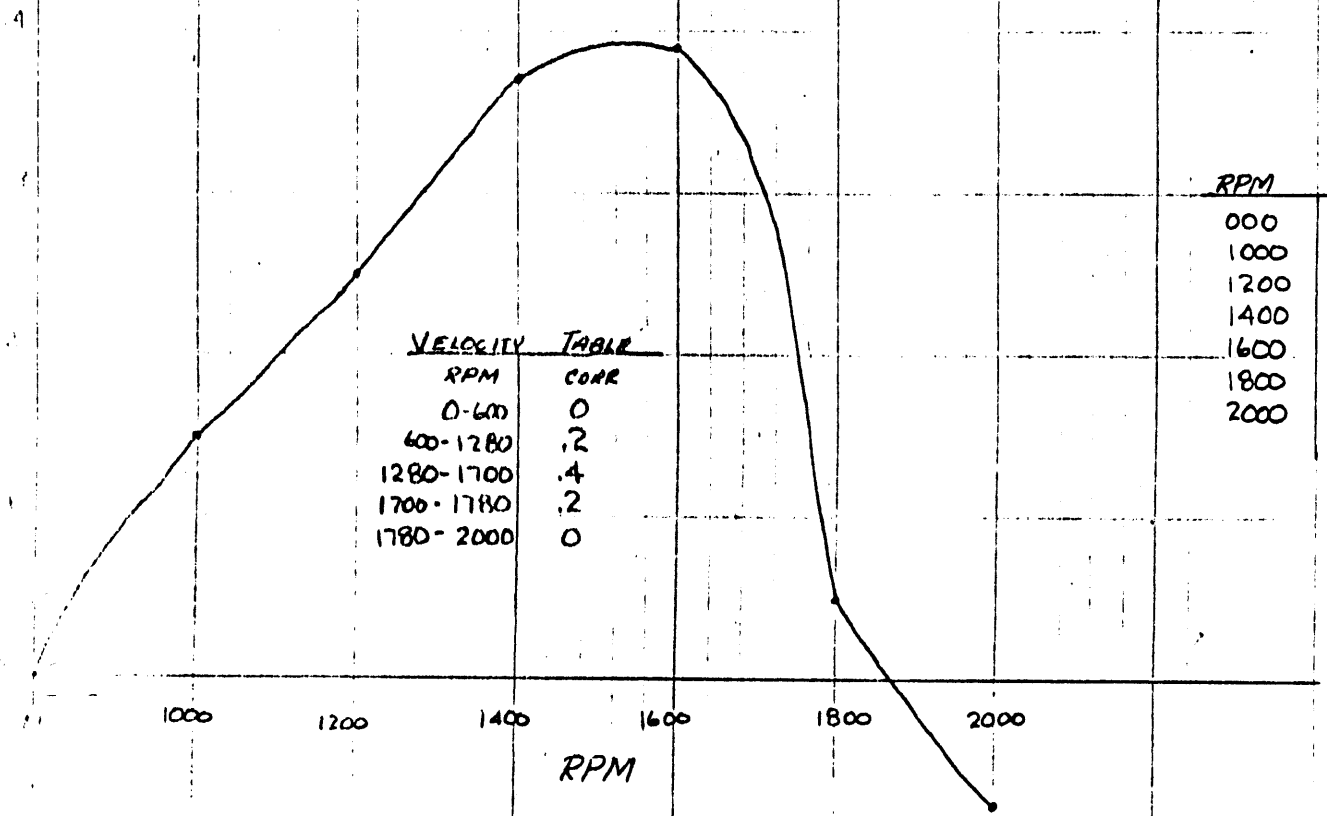
HSB 20-3-77

H- 9733

VELOCITY TABLE USED ONLY FOR FINAL PLOT OF FIELD SHEETS.

```
000050 0 0000 0001 000 125500 020377
000100 0 0002
999999 0 0002
```

SETTLEMENT & SQUAT
NOAA LAUNCH 1255
MAY 26, 1977 JD 146
BUFFALO HARBOR — BUFFALO, N.Y.



VELOCITY TABLE	
RPM	CORR
0-600	0
600-1280	.2
1280-1700	.4
1700-1780	.2
1780-2000	0

RPM	CORRECTION (FT)
000	0
1000	.15
1200	.25
1400	.37
1600	.39
1800	.05
2000	-.08

(ACTUAL VALUES USED TO PLOT CURVE)

SIGNAL LIST

H-9733

OPR-F201-HFP-77 (HSB-20-3-77)

001	2	35	35	12464	075	28	07683	250~~254~~	0000	330040	H-2NC-77-RODANTHE *
002	2	35	21	17568	075	30	22843	250~~254~~	0000	330040	H-3NC-77-AVON *
003	2	35	42	59589	075	37	42791	243	0000	000000	OLD HSE CHAN LT "2I"
004	2	35	35	57746	075	31	15587	243	0000	000000	RODANTHE CHAN LT. I
005	2	35	22	44814	075	33	36445	243	0000	000000	AVON CHAN LT. I
006	2	35	15	47693	075	45	38561	243	0000	000000	OLIVER REEF-LT. TOWER

All these signals were located by Operations of the Atlantic Marine Center.

* Field position, pending adjustment by the N.G.S.

Long Shoal Lt.
P1=530.06
P2=680.60

Firing Range Tower (NE)
P1=374.04
P2=558.95

These objects were located by Launch 1255 using Raydist and used for whole lane comparison only.

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY
- [x] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

- [ ] TO BE CHARTED
- [x] TO BE REVISED
- [ ] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
HSB - LAUNCH 1255	NORTH CAROLINA	PAMLICO SOUND	2/15/78

The following objects HAVE [ ] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
OPR-F201-HFP-77	F-201	H-9733	N.A. 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
DAYBEACON "1"	STUMPY POINT BAY CHANNEL 15' SB ON PILE	35 39	00.909	75 43	04.822		RAYDIST - FL	12204
LIGHT "2"	STUMPY POINT BAY CHANNEL 15' TR ON PILE	35 39	02.616	75 43	03.754		RAYDIST-FL	12204
LIGHT "21"	OLD HOUSE CHANNEL 15' SB ON DOLPHIN	35 42	59.589	75 37	42.791		FL2-6	12205 & 12204
LIGHT "1"	CHICAMACOMICO CHANNEL 15' SB ON PILE	35 35	57.746	75 31	15.587		FL2-6	12204

30

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD		☐ PHOTO FIELD PARTY ☐ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED		FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS
Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.
EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED
Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.
EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.
EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED
When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.
EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH
Enter 'V-Vis.' and date.
EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

APPROVAL SHEET

SURVEY H-9733 (HSB-20-3-77)

The hydrographic records transmitted with this report are complete and adequate.

No direct supervision was given by me during field work.

This survey is complete and adequate with no additional field work recommended.

Approved and forwarded,

Robert Lewis

By William R. Daniels
LCDR., NOAA
Chief, HSB

U.S. DEPARTMENT OF COMMERCE
November 3, 1978 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): 865-2741 Stumpy Point, N.C.
865-3215 Rodanthe, N.C.
865-3305 Long Shoal Light, N.C.

Period: November 21, 1977-February 15, 1978

HYDROGRAPHIC SHEET: H-9733

OPR: F201

Locality: Pamlico Sound, North Carolina

Plane of reference (~~mean lower low water~~) (low water datum): 3.44 ft. Stumpy Pt.
1.33 ft. Rodanthe
1.54 ft. Long Shoal Light

Height of Mean High Water above Plane of Reference is

Remarks: Apply multi-gage (automatic) zoning methods.

NOTE: Low water datum is 0.5 ft. below mean water level.

Don M. Spellman 11/8/78
BS Chief, Tides Branch

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-9733

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	
BEACH SLUE ✓										1
DRAIN POINT ✓										2
GREAT ISLAND ✓										3
HATTERAS ISLAND ✓										4
JACK SHOAL ✓										5
LONG SHOAL ✓										6
OLD POINT ✓										7
PAMLICO SOUND ✓										8
PARCHED CORN POINT ✓										9
PEA ISLAND ✓										10
PEA ISLAND POINT ✓										11
RODANTHE ✓										12
ROUND HAMMOCK BAY ✓										13
SANDY BAY ✓										14
SANDY POINT ✓										15
STUMPY POINT ✓ (Ppl)										16
STUMPY POINT BAY ✓										17
TERRAPIN CREEK BAY										18
WAVES (Ppl) ✓										19
WRECK CREEK ✓										20
WILD BOAR POINT ✓										21
BLACKMAR SLUE										22
										23
										24
										25

Approved:

Chas. L. Hennessy
Chief Geographer - C3x5

18 May 1979

NOAA FORM 76-155 SUPERSEDES C&GS 197

APPROVAL SHEET
FOR
SURVEY H- 9733

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.

B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic Manual. Exceptions are listed in the Verifier's Report.

Date: 3/29/79

Signed: [signature]

Title: Chief, Verification Branch

NOAA FORM 77-27 (5-77) | U. S. DEPARTMENT OF COMMERCE NOAA

HYDROGRAPHIC SURVEY STATISTICS

HYDROGRAPHIC SURVEY NUMBER: H-9733

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	~~5~~ 7
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. ARC, EXCESS	~~3~~ 2

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
accordian ENVELOPES	~~1~~		1- with fathos ↓			
CAHIERS						
VOLUMES	1					
BOXES						

T-SHEET PRINTS (List) none 2- charts #(11555 #12204), 18- bundles of strip charts, 1- envelope of misc. data

SPECIAL REPORTS (List) horizontal control report

OFFICE PROCESSING ACTIVITIES

The following statistics will be submitted with the cartographer's report on the survey

PROCESSING ACTIVITY	AMOUNTS: PRE-VERIFICATION	AMOUNTS: VERIFICATION	AMOUNTS: TOTALS
POSITIONS ON SHEET			2472
POSITIONS CHECKED		150	
POSITIONS REVISED		10	
SOUNDINGS REVISED		60	
SOUNDINGS ERRONEOUSLY SPACED		0	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	
	TIME – HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	1		
VERIFICATION OF CONTROL		5	
VERIFICATION OF POSITIONS		16	
VERIFICATION OF SOUNDINGS		18	
COMPILATION OF SMOOTH SHEET		25	
APPLICATION OF TOPOGRAPHY		0	
APPLICATION OF PHOTOBATHYMETRY		0	
JUNCTIONS		2	
COMPARISON WITH PRIOR SURVEYS & CHARTS		20	
VERIFIER'S REPORT		4	
OTHER		0	
TOTALS	1	90	91

Pre-Verification by K. Ainsley, J. Wilson, F. Saunders	*Beginning Date* 03/16/78	*Ending Date* 02/01/79
Verification by R. Hill	*Beginning Date* 02/16/79	*Ending Date* 03/01/79
Verification Check by H.R. Smith	*Time (Hours)* 6	*Date* 03/08/79
Marine Center Inspection by Hydrographic Inspection Team (AMC)	*Time (Hours)* 8	*Date* 03/21/79
Quality Control Inspection by Robert W. Derkazarian	*Time (Hours)* 47	*Date* 5/16/79
Requirements Evaluation by [signature]	*Time (Hours)* 2	*Date* 6/11/79

D. Myers 5/25/79 2 hrs

Reg. No. 9733

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_____ TIME REQ'D._____ INITIALS_____

REMARKS:

ATLANTIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO. H-9733 FIELD NO. HSB-20-3-77

North Carolina, Pamlico Sound, Long Shoal to Old House Channel

SURVEYED: November 21, 1977 through February 15, 1978

SCALE: 1:20,000 PROJECT NO.: OPR-F201

SOUNDINGS: Raytheon DE-723D and Sounding Pole CONTROL: Raydist (Range-Range)

Chief of Party ..... W.R. Daniels
Surveyed by ..... J.H. Bennett
..... M. Bradley
Automated Plot by ..... XYNETICS 1200 Plotter (AMC)
Verified and Inked by ..... R.R. Hill
March 1, 1979

1. Introduction

a. The sounding datum in this area is called ~~Pamlico Sound~~ Low Water. Datum, Tidal condition are such that Mean Low Water is practically not definable. Elevations of features such as piles, etc. are referenced to Low Water. Features a foot or more above Low Water are exposed during high water conditions.

b. Some changes were made in red ink in the Descriptive Report by the verifier at the time of verification.

c. A new projection parameter was determined for the smooth sheet during verification.

2. Control and Shoreline

a. The source of control is adequately described under Sections F. and G. of the Descriptive Report and in Control Report, OPR-F201-HFP-77, Pamlico Sound North Carolina, dated March 1978.

b. ~~There is no shoreline within the limits of the present survey~~. See Q.C. Report

3. Hydrography

a. Depths at crossings were in good agreement.

b. The unusual depth curves were adequately delineated.

c. The development of the bottom configuration and the investigation of least depths are adequate.

4. Condition of Survey

The smooth sheet and accompanying overlays, hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual.

5. Junctions

An adequate junction has been effected with H-9748 (1978) on the south, however; no contemporary surveys join the east, north and western limit of the present survey.
H-9748 (1978) not available during quality evaluation.

6. Comparison with Prior Surveys

H-1180a	(1873)	1:20,000
H-1362b	(1875-77)	1:20,000
H-1363a	(1875-77)	1:40,000
H-4012	(1917)	1:40,000

Prior vertical datums are comparable to present datum

These prior surveys provide coverage in the area common to the present survey. A comparison of depths between these prior surveys and the present survey reveals little change in the bottom configuration and depths generally are one foot deeper. This change can be attributed to natural changes and differences in survey equipment.

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

7. Comparison With Charts #12204 (22th Edition, February 26, 1977)
#11555 (24th Edition, November 19, 1977)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys, ~~with the exception of charted depths located in the north westerly portion of the surveyed area. Hydrography in this area is believed to originate with prior surveys H-1180a (1873-83) and H-1362b (1876-77), however; these prior surveys are not available to this office for comparison at this time.~~ which require no further consideration, supplemented by the following Presurvey Review Items.

The disposition of Presurvey Review Items located within the limits of this survey were adequately discussed under Section L. of the Descriptive Report.

Except as noted above, the present survey is considered adequate to supersede the charted information within the common area.

b. Aids to Navigation

The aids to navigation located on the present survey are in substantial agreement with their charted positions and adequately serve the purpose intended.

8. Compliance With Instructions

This survey adequately complies with the Project Instructions.

9. Additional Field Work

This is considered a excellent hydrographic survey and no additional field work is recommended.

Any verification errors regarding procedures and presentation of survey data detected during inspection by the Hydrographic Inspection Team have been corrected before submission for administrative approval. HIT comments regarding quality of field work, compliance with instructions, and adequacy of the survey have been incorporated within the Verifier's Report.

Examined and Approved:
Hydrographic Inspection Team
Date: 3-21-79

Robert A. Trauschke, CDR, NOAA
Chief, Processing Division

Carl W. Fisher, CDR, NOAA
Chief, Operations Division

R. D. Sanocki
Technical Assistant
Processing Division

Maureen Kenny, LT, NOAA
Chief, Electronic Data
Processing Branch

Harry R. Smith
Team Leader
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

OA/C352:RWD

May 16, 1979

TO: A. J. Patrick
Chief, Hydrographic Surveys Division

THRU: Chief, Quality Control Branch

FROM: R. W. DerKazarian
Quality Evaluator

SUBJECT: Quality Control Report for H-9733 (1977-78), North Carolina, Pamlico Sound, Long Shoal to Old House Channel

A quality control inspection of H-9733 was accomplished to monitor the survey for obvious deficiencies with respect to data acquisition, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, shoreline transfer, smooth plotting, decisions and actions taken by the verifier, and the cartographic presentation of data.

The status of the control stations (triangulation stations) could not be substantiated by the National Geodetic Survey (NGS). It is assumed, however, that the necessary records and computations will eventually be submitted to the NGS. Ultimately, therefore, it is expected that the triangulation station status of the control stations will be validated. Accordingly, the control station appearing on the smooth sheet is symbolized as a triangulation station pending formal processing and acceptance as such by the NGS, and described as "(Field position)."

In general, the survey was found to conform to the National Ocean Survey's standards and requirements except as stated in the Verifier's Report, the HIT Report, and as follows:

1. Section 2.b of the Verifier's Report is superseded by the following:

The shoreline has been transferred from reviewed topographic manuscripts T-8711 N and S (1946-48), T-8712 N (1946-48), T-8976 (1948-51), and T-9283 (1949-53).

Due to the lapsed time differences of these surveys and the present survey, the shoreline should be used for orientation purposes only; it has been shown in brown on the present smooth sheet.

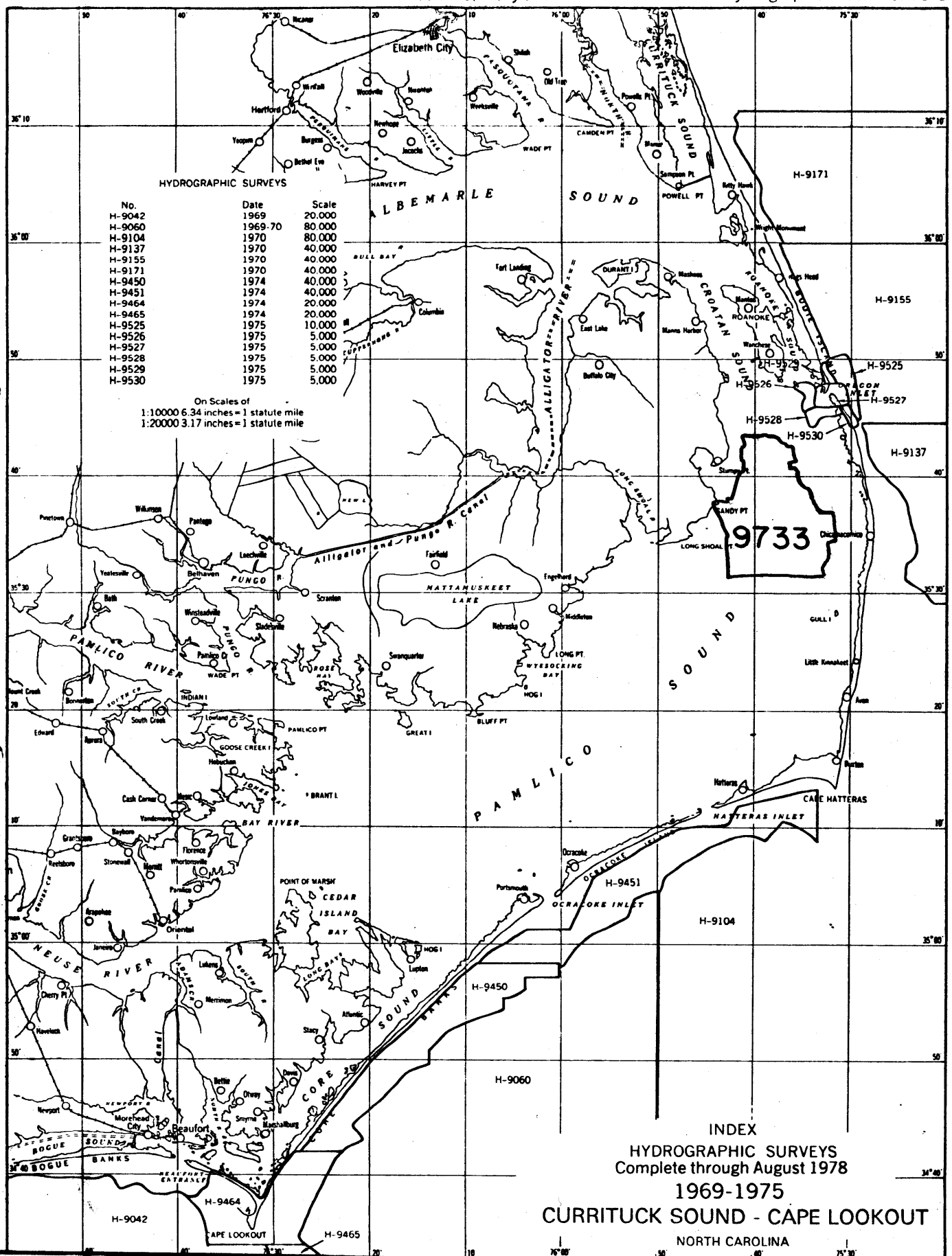
2. Section 4 of the Verifier's Report is supplemented by the following:

The suspicious traces addressed in the Descriptive Report, paragraph P, are on graphics obtained from a Raytheon depth recorder, Model 723D, serial number 37010, which has been previously addressed in Quality Control Reports of the same field season, H-9675 and H-9679 of 1977. It is considered that these suspicious traces are from a possible chronic malfunction and that the appropriate steps should be taken to determine the cause and correct it.

cc:
OA/C35
OA/C351

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Rockville, Maryland

Hydrographic Index No. 71 G



FORM C&GS-8352
(3-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9733

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
JOB 11555	8/10/79	Bill Wanless	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 40
JOB 12204	8/15/79	Bill Wanless	~~Full~~ Part ~~Before~~ After Verification Review Inspection Signed Via
			Drawing No. 40 Fully applied in area
			of overlap with Cht 11555 Dwg # 40
JOB 12204	8/16/79	Bill Wanless	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 40
JOB 12205	8/29/79	Bill Wanless	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 14C and 14D Fully applied
			thru Cht 12204 Dwg # 40
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No. 14
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-DC 8558-P63