

9821

Diagrams 1231-2 & 1232-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey .. Hydrographic ..
Field No. HSB-20-2-79 ..
Office No..... H-9821 ..

LOCALITY

State North Carolina ..
General Locality Pamlico Sound ..
Locality Juniper Swamp Pt to Southwest ..
..... of Gull Shoal ..

1979-80

CHIEF OF PARTY
LCDR T.W. Richards

LCDR G.W. Jamerson
LIBRARY & ARCHIVES

DATE December 9, 1981 ..

☆U.S. GOV. PRINTING OFFICE: 1980-668-537

AREA 2

: CHTS: 11555

11548

: L-1207(82)

HYDROGRAPHIC TITLE SHEET

H-9821

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-20-2-79

State North CarolinaGeneral locality Pamlico SoundLocality Juniper Swamp Pt to Southwest of Gull Shoal
~~Pineclinton Shoal to Southwest of Gull Shoal~~Scale 1:20,000Date of survey 24 APR 79- 18 APR 80Instructions dated August 3, 1979*Project No. OPR-F201-HSB-79Vessel NOAA Launch 1255

LCDR Thomas W. Richards, NOAA

Chief of party LCDR George W. Jamerson, NOAASurveyed by LT David A. Waltz, NOAASoundings taken by echo sounder, ~~hand lead, pole~~ XXXXXXXXXXGraphic record scaled by SW, MP, RLK, JW, DAW, RFT, MHGraphic record checked by SW, MP, RLK, JW, DAW, RFT, MH Verification Branch
Field-HydroplotProtracted by _____ Automated plot by AMC-Xyninetic 12001
XyneticsVerification by Verification Branch, Processing Division, AMCSoundings in XXXXX feet at MLW XXXX
XXXXXREMARKS: *Change No. 1 - September 11, 1979 SW - Steve WeisnerChange No. 2 - September 26, 1979 MP - Mike PhillipsChange No. 3 - February 27, 1979 also applies

RLK - Reginald Keene

Notes and changes in red made during JW - Jim WilsonVerification.

DAW - David Waltz

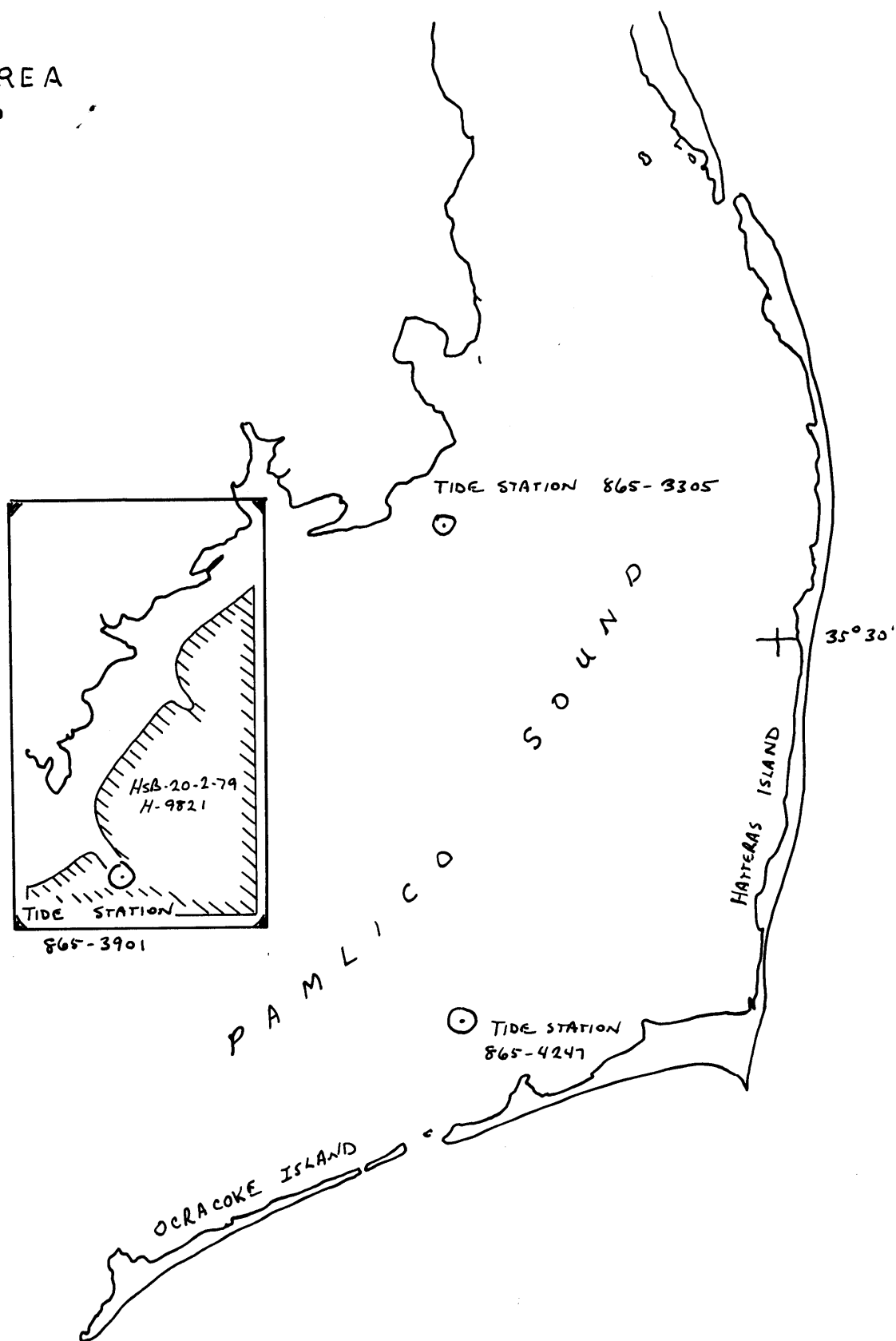
RFT - Randy Trefethen

STANDARDS CHECKED

MH - Maurice Hickson

10-26-82.Colony

SURVEY AREA
CHART 12200



DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-9821
HSB-20-2-79

Scale 1:20,000

Chief of Party: Lt. Cdr. Thomas W. Richards
Lt. Cdr. George W. Jamerson

Officer-in-Charge: Lt. David A. Waltz

Hydrographic Surveys Branch, Hydrographic Field Party #4
Launch 1255

A. PROJECT

This survey was accomplished under project instructions OPR-F201-HSB-79, dated August 3, 1979, and amended by Change No. 1, dated September 11, 1979, and Change No. 2, dated September 26, 1979, *Change No. 3 Feb 27, 1979*

B. AREA SURVEYED

Turner Swamp Point
The area surveyed was an area of Pamlico Sound between Pingleton Shoal to southwest of Gull Shoal, and was bounded by the following ^{*approximate*} points:

Lat. 35°19. ⁶ 8'N,	Long. 75°54. ² 7'W
Lat. 35°33.0'N,	Long. 75°53. ² 0'W
Lat. 35°19.0'N,	Long. 76°03. ³ 0'W

This survey was conducted from April 24, 1979 to April 18, 1980 (JD 114 to 109) ^{*not*} inclusive.

C. SOUNDING VESSEL

All soundings obtained on this survey were obtained from NOAA Launch 1255 (EDP #1255). All survey records are annotated with the vessel number 1255.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The following Raytheon fathometer equipment was used during the survey:

JD 114 - 128: (1979)	Recorder Model #723-D Serial #37010
	ECU Model #723-D Serial #37011
	Digitizer Model #DDM Serial #1907

JD 354 (1979) - JD 109 (1980)

Recorder Model #723-D
Serial #37018

ECU Model #723-D
Serial #37011

Digitizer Model #DDM
Serial #1907

No unusual problems were encountered with the equipment. ✓
The fathometer was monitored continuously while sounding and was under constant adjustment to insure that no initial corrections were necessary.

Settlement and squat tests on Launch 1255 were run on March 24, 1980 at Oliver Reef Light. The results of these tests are included in the Appendix of this report. Settlement and squat corrections will be applied via the TC/TI tape during smooth sheet plotting at the Atlantic Marine Center and were not applied to the field sheets. ✓

Velocity corrections were determined solely by means of bar checks, which were taken as frequently as possible. Bar checks were taken only when sea conditions were calm enough to accurately read the markings. Chain was used for bar check line, resulting in a zero line correction. The chain was measured against a steel tape on May 4, 1979, and on March 11, 1980. ✓

The velocity and instrument corrections were determined by averaging the digital depth (both up and down) for the various bar check depths. These were added to the transducer draft to obtain the measured water depth above the bar. This value was then compared with the true depth, which is the bar depth plus a zero line correction. No velocity correctors were applied on the field sheet. See Verification Report section 4. a. b. ✓

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

Since the periodic tide in Pamlico Sound is less than one-half foot, no predicted tides were used for the on-line plot. Non-periodic changes dominate the water level in the sound, primarily due to wind. Daily observations of the tide staff at Oliver Reef Light were made and recorded in the sounding volume. The field sheets were corrected for "rough" tides from these observations by reducing them to a mean low water value of 1.7 feet on the Oliver Reef Light Tide Staff. This 1.7 foot value was supplied by Rockville Tides Branch from data obtained prior to this survey. ✓

E. HYDROGRAPHIC SHEETS

The field sheets were prepared in the field using a PDP8/e computer and a DP-3 complot plotter. Work sheets, semi-smooth sheets, smooth field sheets, and overlay sheets are included with this survey. Mainscheme hydrography is plotted on the smooth field sheets while developments, splits, bottom samples, prior survey soundings, junction soundings, charted soundings, presurvey review items, and aids to navigation are shown on various overlay sheets. Projection and electronic control parameters for the field sheets are included in the Appendix of this report. The final smooth sheet and verification of this survey will be accomplished at the Atlantic Marine Center on the Harris/7 computer and the ~~Xynetics~~ 1201 plotter.

F. CONTROL STATIONS

Control stations used during this survey were either existing geodetic control stations published by NGS or were established by Horizontal Control Section, Hydrographic Surveys Branch, to third order or better standards. All stations are referred to the North American 1927 datum. A list of all control stations used during this survey is included in the Appendix of this report.

G. HYDROGRAPHIC POSITION CONTROL

The method used to control this survey was the ARGO DM-54 system operating in the range-range mode. The following equipment was used:

<u>MOBILE STATION</u>	<u>SERIAL</u>	
RPU	R047854	114-128 (1979)
	R047844	354 (1979) - 109 (1980)
CDU	C047824	114-128 (1979)
	C037961	354 (1979)
	C037948	003 (1980) - 050 (1980)
	C047821	079 - 109 (1980)
ALU	A047859	114 (1979) - 050 (1980)
	A0379106	079 - 109 (1980)
Power Supply	V0478100	114 - 128 (1979)
	V0379112	354 (1979) - 109 (1980)

H-2-NC-77 (Hydroplot Sta. No. 101)

RPU	R0379100	114 - 128 (1979)
ALU	A047851	114 - 128 (1979)
Power Supply	V0379131	114 - 128 (1979)

H-1-NC-79 (Hydroplot Sta. No. 103)

RPU	R047851	114 - 115 (1979)
	R0379115	121 - 128 (1979)
ALU	A047846	114 - 115 (1979)
	A0379122	121 - 128 (1979)
Power Supply	V0379127	114 - 115 (1979)
	V0379112	121 - 128 (1979)

ARGO NAGS HEAD (Hydroplot Sta. No. 111 & 113)

RPU	R0379119	354 (1979) - 109 (1980)
ALU	A047851	354 (1979) - 109 (1980)
Power Supply	V0379131	354 (1979) - 050 (1980)
	V0379119	079 (1980) - 109 (1980)

H-50-NC-79 (Hydroplot Sta. No. 112 & 114)

RPU	R047840	354 (1979) - 109 (1980)
ALU	A0379122	354 (1979) - 050 (1980)
	A0379116	079 - 109 (1980)
Power Supply	V0379112	354 (1979) - 050 (1980)
	V0478103	079 -109 (1980)

Calibration of the ARGO system was done by comparing the digitized lane count values with calculated values for Oliver Reef Light (Station No. 006). Position information for this light was provided by Hydrographic Surveys Branch Support Section. The offset distance from the ARGO antenna to the center of the light was accounted for by averaging pairs of observed readings taken on opposite sides of the structure. Four values (two pairs) were observed for each calibration. Calibrations were made before and after hydrography each day, and were recorded on the master printouts.

On a few days, the ARGO equipment failed to function during hydrography. If no ending calibration could be made for the day, the single morning calibration was used to determine partial lane correctors. At no time was hydrography continued after problems were encountered without first recalibrating the system.

Since the relatively large steel structure of Oliver Reef Light could be expected to affect antenna tuning and possibly change partial correctors, a sextant angle calibration was made on JD 84. Partial correctors obtained by this method differed from the average JD 84 correctors by 0.045 lane (4.01m) for Pattern 1 and 0.035 lane (3.18m) for Pattern 2. Records for these calibrations are filed with this survey.

The ARGO was operated using time slots one and five. ✓
Smoothing code zero was used in the 1979 field season and
code two was used for the 1980 season.

H. SHORELINE

There was no shoreline within the limits of this survey. ✓

I. CROSSLINES

Crosslines constitute ^{13.6%}15% of the mainscheme hydrography.
68% of the crosslines agree exactly and 99% agree within one
foot. No crossline sounding differed by more than two feet.
The reasons for these disagreements are believed to be due
to the approximate tide corrections applied on the field
sheet. See Verification Report, Section 3. a.

J. JUNCTIONS

This survey junctions with the following surveys:

- (1) H-9802, scale 1:20,000, 1978-79 to the east;
- (2) H-9863, scale 1:20,000, 1980 to the south.

Ninety-nine percent (99%) of these junction soundings
agree within one foot when compared with the current survey
and none of the junction soundings are in disagreement by
more than two feet. The reason for this disagreement is
believed to be the approximate tide corrections applied on
the field sheet.

The hydrographer recommends that in the junction areas,
the soundings from the current survey be charted.
See Verification Report, section 5

K. COMPARISON WITH PRIOR SURVEYS

This survey was compared with the following prior surveys:

✓ H-672 (1858), 1:40,000 scale. 268 soundings were compared,
72% of which agreed within one foot, 24% agreed within two
feet, and 4% agreed within three feet. No sounding disagreed
by more than three feet.

H-1254 (1875), 1:20,000 scale. Of 231 soundings compared,
90% agreed within one foot and 10% agreed within two feet.
No sounding disagreed by more than two feet.

H-1362A (1875-76), 1:20,000 scale. 445 soundings were
compared, 97% of which agreed within one foot, and 3% agreed
within two feet. No sounding disagreed by more than two feet.
H-1363A (1875-77)

The reason for the disagreement is believed to be primarily because of the rough tidal corrections applied to the field sheet. In all cases, soundings from the present survey should be charted in lieu of the prior survey soundings in the common areas. See Verification Report, section 6.

L. COMPARISON WITH THE CHART

Comparison with charted features was made from enlargements of Chart 11555, 1:80,000 scale, 24th Edition. The charted soundings are on the field sheet in brown. General agreement is excellent, with 90% of all soundings compared being within one foot, and 97% being within two feet. Most notable is an ^{unsupported} charted two-foot sounding found to be in 12 feet of water, at Lat. 35°31.8'N, Long. 75°54.6'W. See Verification Report
Section 7. 48" 36"

In all cases, it is recommended that the soundings from the present survey supersede the charted soundings.

PRESURVEY REVIEW ITEMS

ITEM 22 - A dangerous submerged obstruction reported in 1975 to be a sunken caterpillar tractor charted in position Lat. 35°21.7'N, Long. 75°58.0'W. This item was searched for on JD 109 by running north-south lines over the charted position, spaced 50m apart. The area searched was a one-mile square area centered over the obstruction. The investigation produced no evidence of the obstruction. These sounding lines are not plotted since they add no new information to the survey. Plotted during Verification pos. #2569-2653, See Verification Report, section 7.a.1.

Recommendation: Retain as charted. Concur

ITEM 29 - A dangerous sunken wreck charted at Lat. 35°30.3'N, Long. 75°54.8'W. The vessel is described as a 40-foot fishing vessel with four feet of mast and outrigger exposed. An investigation of this wreck was made on JD 109 by running north-south lines spaced 50m apart in a one-mile square area centered on the wreck. No evidence of the wreck was found. These soundings were not charted because they add no new information to the survey. Plotted during verification pos. #2660-2725

Recommendation: Retain wreck in charted position but Concur delete the word "mast" since no exposed mast was seen. See Verification Report section 7.a.2.

M. ADEQUACY OF SURVEY

This survey, H-9821, HSB-20-2-79, is complete and adequate to supersede prior surveys for charting in the common areas. See Verification Report, section 7.

N. AIDS TO NAVIGATION

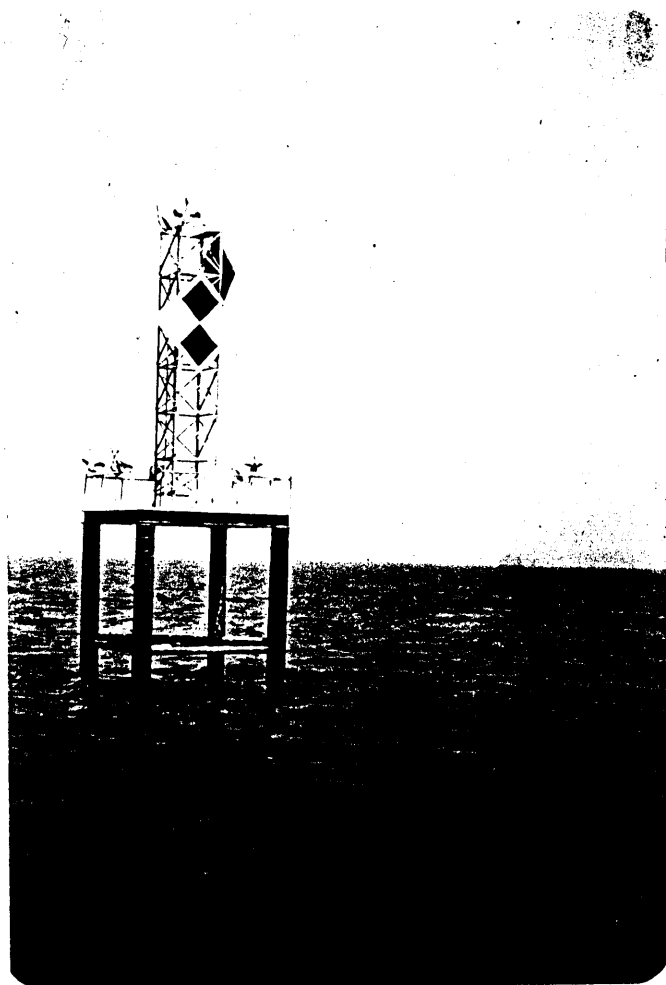
There were no floating aids to navigation within the survey area. Fixed aids were located with the ARGO positioning system, and positions are tabulated on NOAA Form 76-40 which is included in the appendices to this report. These aids adequately serve the purpose for which they were intended and are adequately described in the Light List. *See Verification Report, sections 4.d. & 7.b.*

O. STATISTICS

Total Positions	2729
Total Nautical Miles of Hydrography	700
Square Nautical Miles of Hydrography	54
Bottom Samples	56
Nautical Miles of Crossline	86
Nautical Miles of Development	52

P. MISCELLANEOUS

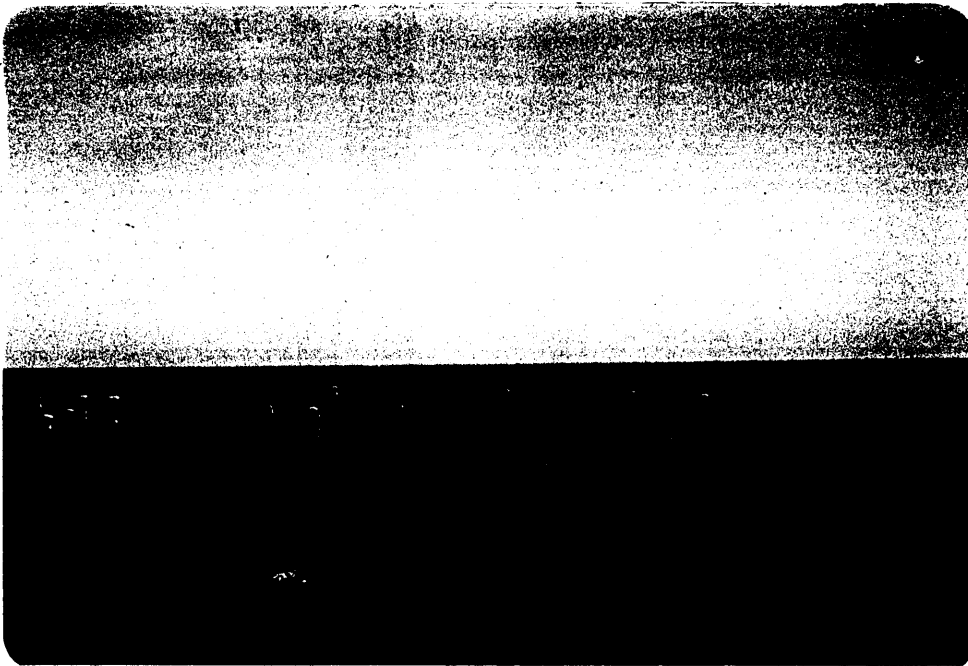
Attached is a photograph of Gull Shoal Light (Light List #4273) located on JD 354. The position of this aid is given on NOAA Form 76-40 in the appendices.



Q. RECOMMENDATIONS

FISH NET AREAS - There are several pound net stake lines in the area of this survey. Net stakes have been located by the field unit by detached positions at each of the lines, and by running buffer lines along the row of stakes. Their positions are in the survey records. These stakes are definitely permanent structures and should be charted. Construction of the net system consists of small ^{stakes} logs 3 to 6 inches in diameter driven into the bottom, and a net hung vertically on these stakes. If a net stake is abandoned, it will often break off at or just below the water surface, producing an extreme hazard for small craft. A photograph of a typical pound net is included below. *concur*

Recommendation: Chart the positions of net stakes as located by this unit. *concur*



FIELD TIDE NOTE

H-9821

Predicted tides were not applied to the sounding data on the field sheet since Pamlico Sound has a periodic tide of less than one-half foot. Non-periodic changes dominate the water level, due to wind setup and rainfall. Water level corrections were applied to the data by reducing the daily soundings to a preliminary low water datum supplied by the Rockville Tides Branch. This datum corresponded to 1.7 feet on the Oliver Reef Light (857-4247) Tide staff. Morning and afternoon staff observations were made of the Oliver Reef Staff, and the daily average was reduced to low water datum by means of a "rough" tide tape on the off-line field plot.

ADR water level gages were installed at the following locations:

<u>Site and Number</u>	<u>Location</u>	<u>Period</u>
Cedar Island Ferry 865-5151	35°01.2'N <i>off sheet</i> 76°18.6'W	10 NOV 1977 End of Survey
Long Shoal Light 865-3305	35°33.8'N <i>off sheet</i> 75°44.1'W	15 NOV 1979 End of Survey
Oliver Reef Light 865-4247	35°15.8'N <i>off sheet</i> 75°45.6'W	15 NOV 1979 End of Survey
Gull Shoal Light 865-3901	35°22.0'N 75°57.5'W	28 NOV 1979 End of Survey
Oregon Inlet 865-2587	35°47.8'N <i>off sheet</i> 75°33.0'W	24 AUG 1978 End of Survey

Contract observers monitored the Cedar Island Ferry and Oregon Inlet gages. Launch personnel were observers of the other gages. A direct line of communication was maintained with contract observers.

The Cedar Island Ferry and Oregon Inlet gages were leveled at the time of installation. All other gages were not leveled since they are located on offshore platforms. All gages operated satisfactorily except as noted on the weekly records and on NOAA Form 77-79, Preliminary Evaluation of Tide Record.

Atlantic Marine Center
439 West York Street
Norfolk, Virginia 23510

September 16, 1980 CAM11/DAW

TO: Chief, Tides Branch, OA/C231
FROM: *Robert Lewis*
George W. Jamerson, Lt. Cdr.
Chief, Hydrographic Surveys Branch
SUBJECT: Request for Tide Data

Please furnish smooth tide correctors and zoning information to Atlantic Marine Center, Processing Division, CAM3, for Survey H09821, HSB-20-2-79, Project OPR-F201-HSB-79, Pamlico Sound, North Carolina. The following times include two hours before and after the actual times of hydrography.

<u>Julian Day</u>	<u>Hydro Begins (GMT)</u>	<u>Hydro Ends (GMT)</u>
114 (1979)	1253	2053
115	1104	2041
121	1031	1927
122	1034	1138
127	1036	1915
128	1017	1933
354	1252	1803
003 (1980)	1234	2153
017	1247	2248
029	1309	2236
035	1227	2220
037	1229	1717
043	1249	2248
050	1431	2224
079	1149	2227
109	1322	2156

GEOGRAPHIC NAMES

H-9821

Name on Survey

A ON CHART NO. 11555

B ON PREVIOUS SURVEY
NO.C ON U.S. QUADRANGLE
MAPSD FROM LOCAL
INFORMATION

E ON LOCAL MAPS

F P.O. GUIDE OR MAP

G RAND McNALLY
ATLAS

H U.S. LIGHT LIST

K

~~Back Creek~~

1

~~Berrys Bay~~

2

~~Brooks Creek~~

3

Englehard

4

~~Far Creek~~

5

~~Gibbs Point~~

6

Gibbs Shoal

7

Gull Rocks

8

Gull Shoal

9

Juniper Swamp Point

10

~~Lane Tree Creek~~

11

~~Middletown Anchorage~~

12

~~Middletown Creek~~

13

Pamlico Sound

14

Shad Point

15

~~Waupopin Creek~~

16

Wysocking Bay

17

~~LONG POINT~~

18

~~NORTH CAROLINA~~

Approved:

19

20

21

Chief Geographer - C3+5

22

27 Aug 1982

23

24

25

NOAA LAUNCH 1255

SETTLEMENT 8 SQUAT

DETERMINED IN PAMLICO SOUND, NC
BY THE LEVEL METHOD (MARCH 24, 1980)
AND THE FATHOMETER METHOD (APRIL 2, 1980)

COMPUTED BY-DAM
CHECKED BY-JW

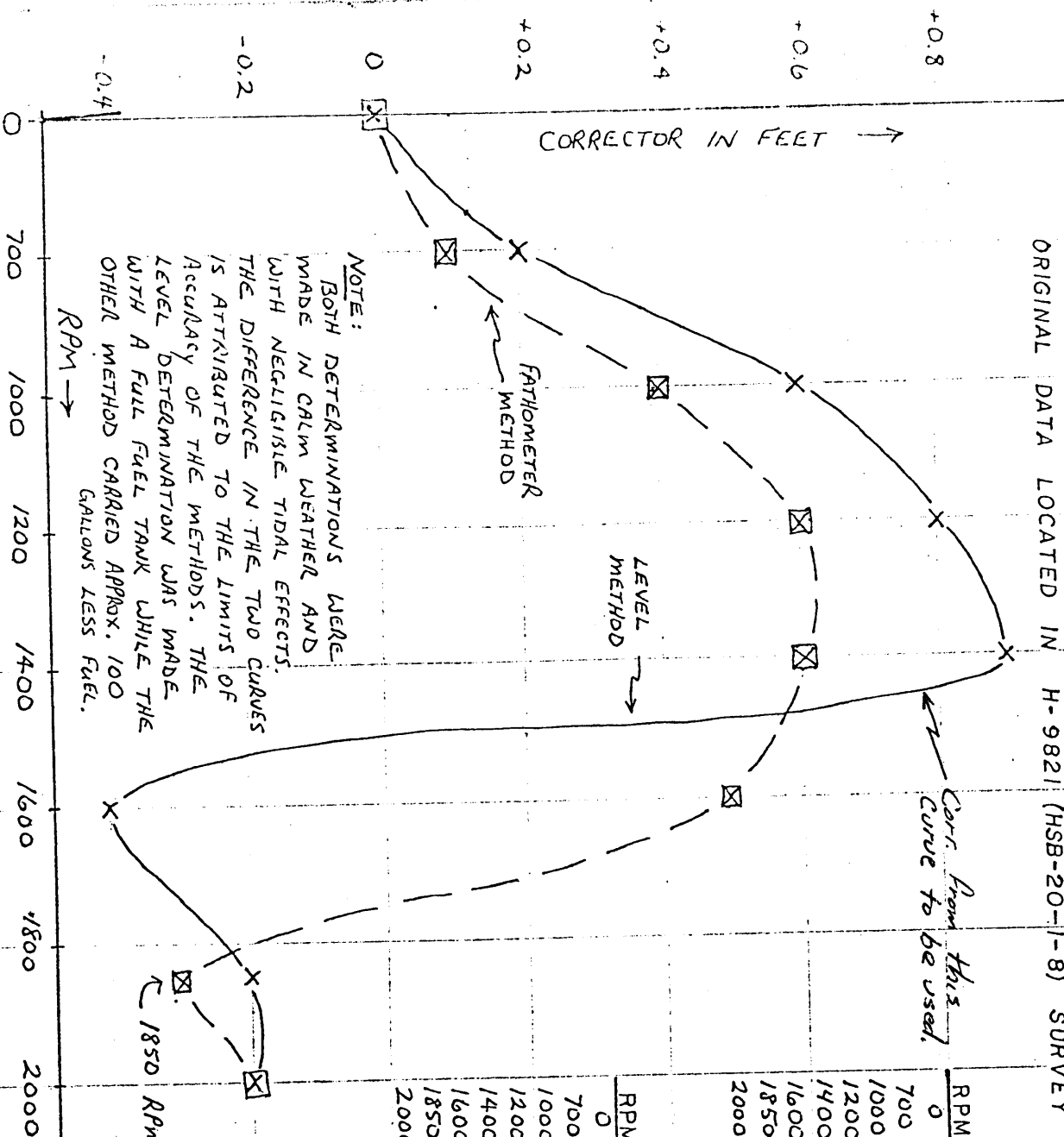
ORIGINAL DATA LOCATED IN H-9821 (HSB-20-1-8) SURVEY RECORDS

LEVEL METHOD

RPM	Level Readings	Mean	Corrector
0	11.25	11.34	0
700	11.50	11.46	+0.2
1000	11.89	11.82	+0.6
1200	12.09	12.08	+0.8
1400	12.22	12.20	+0.9
1600	11.00	10.85	-0.4
1850	11.08	11.08	-0.2
2000	11.15	11.12	-0.2

FATHOMETER METHOD

RPM	Scaled Soundings	Mean	Corrector
0	18.3	18.3	0
700	18.2	18.1	+0.1
1000	17.9	17.9	+0.4
1200	17.7	17.7	+0.6
1400	17.7	17.7	+0.6
1600	17.7	17.8	+0.5
1850	18.6	18.6	-0.3
2000	18.6	18.5	-0.2



NOTE:

BOTH DETERMINATIONS WERE MADE IN CALM WEATHER AND WITH NEGLIGIBLE TIDAL EFFECTS. THE DIFFERENCE IN THE TWO CURVES IS ATTRIBUTED TO THE LIMITS OF THE ACCURACY OF THE METHODS. THE LEVEL DETERMINATION WAS MADE WITH A FULL FUEL TANK WHILE THE OTHER METHOD CARRIED APPROX. 100 GALLONS LESS FUEL.

APPROVAL SHEET
FOR
SURVEY H-9821 (1979-80)

- 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 ~~XXXXXXXX~~ has not been made. A new final sounding printout has ~~XXXXXXXX~~ 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 Verification Report.

Date: Nov 25, 1981


Chief, Verification Branch

R. AUTOMATED DATA PROCESSING

Programs used during field data acquisition and field processing of this survey are as follows:

<u>PROGRAM</u>	<u>VERSION DATE</u>
RK111 Range-Range Real Time Hydroplot	1/30/76
RK201 Grid, Signal, and Lattice Plot	4/18/75
RK211 Range-Range Non-Real Time Plot	1/15/76
RK300 Utility Computations	2/05/76
RK330 Reformat and Data Check	5/04/76
PM360 Electronic Corrector Abstract	2/02/76
RK407 Geodetic Inverse/Direct Computation	9/25/78
RK561 H/R Geodetic Calibration	2/19/75
AM602 Elinore-Line Oriented Editor	5/20/75

S. REFERENCE TO REPORTS

Control Report for OPR-F201, which is included with this report.

Respectfully submitted,



Lt. David A. Waltz, NOAA
OIC, HFP-4

APPROVAL SHEET
HYDROGRAPHIC SURVEY H-9821
HSB-20-2-79

The hydrographic records transmitted with this report are complete and adequate to supersede prior surveys for charting with no additional hydrography recommended.

Daily supervision was not made by the Chief of Hydrographic Surveys Branch during the survey, and the Chief at the time of the survey was transferred before the survey was submitted for review.

Approved and forwarded,



George W. Jamerson
LCDR, NOAA
Chief, Hydrographic Surveys Branch



U.S. DEPARTMENT OF COMMERCE
November 24, 1980 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): 865-3901 Gull Shoal, NC

Period: February 4, 1980 - April 23, 1980

HYDROGRAPHIC SHEET: H-9821

OPR: F201

Locality: Pamlico Sound, North Carolina

(Low Water Datum): 2.21 ft. - Gull Shoal ✓
Plane of reference ~~Mean Lower Low Water~~ ~~Mean Lower Low Water~~:

Height of Mean High Water above Plane of Reference is *See Verification Report*
Section I

REMARKS: Recommended zoning:

Zone direct on Gull Shoal, North Carolina from February 4 - April 23, 1980

No smooth tide correctors will be available for April 29, 1980, due to
all tide gages in area being removed on April 25, 1980


Chief, Datums and Information Branch

H-9821

HYDROGRAPHIC SURVEY STATISTICS

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1	BOAT SHEETS & PRELIMINARY OVERLAYS		12	
DESCRIPTIVE REPORT		1	SMOOTH OVERLAYS: POST ARC, EXCESS		3	
DESCRIP- TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						
CAHIERS			1			
VOLUMES						
BOXES			1 sup to 1-5 Vol. 2-Env. Corrections			

T-SHEET PRINTS (List)

SPECIAL REPORTS (List) Horizontal Control Report OPR-F201-HFP-79

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	PRE- VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			2785
POSITIONS CHECKED		5	
POSITIONS REVISED		0	
SOUNDINGS REVISED		25	
SOUNDINGS ERRONEOUSLY SPACED			
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED			
TIME - HOURS			
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	4		
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS		96	
VERIFICATION OF SOUNDINGS		121	
COMPILATION OF SMOOTH SHEET		66	
APPLICATION OF TOPOGRAPHY		-	
APPLICATION OF PHOTOBATHYMETRY		-	
JUNCTIONS		10	
COMPARISON WITH PRIOR SURVEYS & CHARTS		20	
VERIFIER'S REPORT		10	
OTHER			
TOTALS	4	323	327
Pre-Verification by	Beginning Date	Ending Date	
RKW	9/23/80	9/23/80	
Verification by	Beginning Date	Ending Date	
RKW, JBW, DVM, LGC	10/15/80	10/13/81	
Verification Check by	Time (Hours)	Date	
GFT	40	9/8/81	
Marine Center Inspection by	Time (Hours)	Date	
HIT	10	10/27/81	
Quality Control Inspection by	Time (Hours)	Date	
Lisa Quinlan	25	03/15/82	
Requirements Evaluation by	Time (Hours)	Date	
Steph J. Myers	4.0	10/4/82	

7/23/82 4 hrs

REGISTRY NO. H-9821

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

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

CARDS CORRECTED

DATE _____ TIME REQUIRED _____ INITIALS _____

REMARKS:

ATLANTIC MARINE CENTER
VERIFICATION REPORT

REGISTRY NO.: H-982I

FIELD NO.: HSB-20-2-79

North Carolina, Pamlico Sound, ~~Pingleton Shoal to Gull Shoal~~
^{Juniper Swamp Point to Southwest of Gull Shoal}

SURVEYED: April 24 through May 8 and December 20, 1979
and January 3 to April 18, 1980

SCALE: 1:20,000

PROJECT NO.: OPR-F20I

SOUNDINGS: DE-723D Fathometer

CONTROL: Argo DM-54
(Range-Range)

Chief of Party T. W. Richards
G. W. Jamerson
Surveyed By D. A. Waltz
Automated Plot by Xynetics I20I Plotter (AMC)

I. INTRODUCTION:

a. One unusual problem was encountered; the sounding datum in this area is a Low Water Datum. Tidal conditions are such that Mean Low Water is not definable. Elevations of features such as stakes, etc., are referenced to Low Water. Features a foot or more above Low Water are exposed during high water conditions.

b. Notes and changes were made in red ink in the Descriptive Report during verification.

2. CONTROL AND SHORELINE:

a. The control was adequately described in Sections F. & G. of the Descriptive Report and in the Control Report, OPR-F20I-HSB-79, Pamlico Sound, North Carolina.

b. There is no shoreline available for this survey.

3. HYDROGRAPHY:

a. The agreement at crossings on this survey is adequate; depths agree within the limits prescribed by the Hydrographic Manual.

b. The standard depth curves were drawn in their entirety. Some dashed curves were added for further delineation of the bottom configuration.

c. This survey is considered adequate to delineate the basic bottom configuration and least depths in the area prescribed by the Project Instructions with the following exceptions.

✓ (1) A 13-foot shoal in Lat. $35^{\circ}21'42''$ Long. $75^{\circ}55'30''$. It would have been desirable to run 50 meter line spacing over this feature to determine its extent and to insure the determination of a least depth.

(2) A 12-foot shoal (Gull Shoal) in Lat. $35^{\circ}22'20''$ Long. $75^{\circ}57'00''$. This feature should have been developed at 50 meter line spacing to determine its extent and to insure the determination of a least depth.

✓ (3) A 13-foot shoal in Lat. $35^{\circ}25'10''$ Long. $75^{\circ}55'10''$. This shoal should have been developed with 50 meter line spacing to better delineate its extent and to insure the determination of a least depth.

(4) A row of stakes in the vicinity of Lat. $35^{\circ}30'54''$ Long. $75^{\circ}56'42''$ was located at the southeast end only. The extent and northwest end was not determined. The east end was noted on the field sheet and that the west end extends into shoal water.

4. CONDITION OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records and reports comply with the requirements of the Hydrographic Manual with the following exceptions:

a. The number of barchecks taken (5) for this survey and the method of ^{taken with sea conditions under consideration.} noting the observations is not in compliance with sections 1.5.2, 4.9.5.1.1 and 4.9.5.1.3 of the Hydrographic Manual. Digital depths were not compared with analog depths.

b. The velocity table did not extend deep enough to cover all survey depths. ✓

c. It is questionable whether the 50-meter line spacing used to investigate Presurvey Review Items 22 and 29 was an adequate investigation. The instructions suggested contacting local commercial fishing interest in the area about the items but there was no documentation in the Descriptive Report as to if this was done. An otter-board sweep, improvised drag or a reduced line spacing (25 meters) would have been more appropriate. ✓

d. The methods of locating the Aids to Navigation was not in compliance with sections 1.6.5 and 4.5.13 of the Hydrographic Manual. ✓

There was considerable confusion between the hydrographer's descriptions of fixed aids to navigation and the light list. The hydrographer failed to note any differences so in all cases the light list descriptions were used. ✓

e. A comparison was not made with the edition of chart 11555 required by the Project Instructions in section 4.12.

5. JUNCTIONS

Adequate junctions were made with the following surveys:

H-9802 (1978-79)
H-9863 (1980)

to the east will be completed during Q.C. of this survey
to the south

These junctions are complete and no further consideration or work is necessary.

6. COMPARISON WITH PRIOR SURVEYS

H-661 (1857-58) 1:20,000
H-672 (1858) 1:40,000
H-1362a (1875-76) 1:20,000
H-1363a (1875-77) 1:40,000

These are the most recent surveys that provide complete coverage of the survey area.

In general, the present survey is in good agreement with these prior surveys. In 95% of the survey area the differences are from ± 0 to 1 foot. The remaining 5% are ± 2 feet different with no amount of difference greater than 3 feet. The bottom configuration and general depths appear to have remained fairly stable within the survey area. The differences can be attributed to natural change and to improved survey methods.

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

7. COMPARISON WITH CHART NO. 11555 (26th EDITION, NOVEMBER 24, 1979)

This is not the edition of the chart that the field used for their comparison; their comparison was made with the 24th edition. The 26th edition of the chart was used for comparison rather than the 25th, specified by the Project Instructions, because it was more current with the survey. *The 24th and 25th editions of the chart common to the area of the present survey are identical.*

a. Hydrography

Most all of the charted hydrography 99.9% originates with the previously discussed prior surveys, which require no further consideration. The remaining .1% are in good agreement with the present survey.

The present survey is adequate to supersede the charted information when attention is given to the following items:

(1) Presurvey Review Item #22, dangerous submerged obstruction charted in Lat. $35^{\circ}21'39''$ Long. $75^{\circ}58'02''$ reported in 1975. The search by the field did not find this item nor was it adequate to disprove the existence of the obstruction. *concur*

(2) Presurvey Review Item #29 a dangerous sunken wreck with mast visible in Lat. $35^{\circ}30'20''$ Long. $75^{\circ}55'00''$ position approximate, originating with LNM 42/77. The search by the field did not locate this item nor was it adequate to disprove the existence of the wreck. *Recommended deletion of "Mast", chart dangerous wk PA*

(3) A charted obstruction in Lat. $35^{\circ}32'20''$ Long. $75^{\circ}52'58''$. No investigation was run on this item. *Retain as charted.*

These items are all recommended for retention as charted or as recommended by the hydrographer in Section L of the Descriptive Report as the investigations were not adequate to disprove them. Consideration of these items should be given to determine the desirability of additional work being conducted to determine their location, least depth and/or existence. *concur*

b. Aids to Navigation

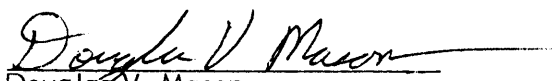
The aids to navigation appear to adequately mark the intended features on this survey. The field failed to identify "Far Creek Channel Lt. I" (Daybeacon "I") and "Hog Island Daybeacon" (Hog Island Shoal Daybeacon) correctly nor did they explain the difference if in fact one exists. Further information can be found under section 4d. of this report.


8. COMPLIANCE WITH INSTRUCTIONS


This survey adequately complies with the Project Instructions with the exceptions listed elsewhere in this report.

9. ADDITIONAL FIELD WORK

This is a good basic survey.* Additional work may be desirable as per section 7 of this report.


Douglas V. Mason
Cartographer Technician
Verification of Data


Leroy G. Cram
Cartographer
Evaluation and Analysis
October 13, 1981


Guy F. Trefethan
Senior Cartographic Technician
Verification Check

* The westward extent and delineation of a row of stakes that extends beyond the limits of the survey at lat 35° 31.11' N, long 75° 56.92' W should be determined. The field sheet noted only that this feature extended into shoaler water.

INSPECTION REPORT
H-9821

The completed survey has been inspected by the Hydrographic Inspection Team with regard to survey coverage, delineation of depth contours, development of critical depths, cartographic symbolization, and verification or disproof of charted data. The Verification Report has presented the facts accurately and properly, the procedures used were appropriate, and the recommendations are logical and justifiable. The survey complies with National Ocean Survey requirements except as noted in the Verification Report. The survey records comply with NOS requirements except where noted in the Verification Report. The Hydrographic Inspection Team concurs with the verifier's findings, actions, and recommendations.

Examined and Approved
Hydrographic Inspection Team



Karl Wm. Kieninger, CDR, NOAA
Chief, Processing Division



R. D. Sanocki
Chief, Verification Branch
Processing Division



Evelyn J. Fields, LT, NOAA
Quality Control Officer
Operations Division



James C. Gardner, Jr., LTJG, NOAA
Chief, EDP Branch
Processing Division

Approved/Forwarded
October 30, 1981



Richard H. Houlder, RADM, NOAA
Director, Atlantic Marine Center



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

C352:LQ

March 13, 1982

TO: Glen R. Schaefer *AS*
Chief, Hydrographic Surveys Division

THRU: Chief, Quality Control Branch *qm*

FROM: *Lisa Quinlan*
Lisa Quinlan
Quality Evaluator

SUBJECT: Quality Control Report for H-9821 (1979-1980), North Carolina,
Pamlico Sound, Juniper Swamp Point to Southwest of Gull Shoal

A quality control inspection of H-9821 was accomplished to monitor the survey for adequacy with respect to data acquisition, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, smooth plotting, decisions made and actions taken by the verifier, and the cartographic presentation of data. Revisions and additions to the smooth sheet, plus helpful comments made to the verifier, are identified on a one-half scale copy of the survey to be furnished the verifier. 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 and as follows:

The charted landmark RADIO TOWER at latitude 35°32.0'N, longitude 75°58.4'W was not mentioned by the hydrographer; this item is deferred to the compiler for disposition.

cc:
C351



(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET, FATHOMS

NOAA FORM 75-21
(10-72)

U.S. DEPARTMENT OF COMMERCE

NOAA
NATIONAL OCEAN SURVEY

VELOCITY CORRECTIONS

~~XXX~~ Pacific Hydrographic Field Party

Lieutenant Dirk R. Taylor Comdg

These corrections are to be used

between April 20 19 79 and Oct. 31 19 79

in the locality Hunters Point, San Francisco
Bay, California

for hydrographic surveys Nos. H-9819

(For deep water add to these figures)

DEPTHS IN FATHOMS

DEPTH / CORRECTOR

4.9 / 0.0

18.7 / 0.2

26.5 / 0.4

33.4 / 0.6

43.4 / 0.8

~~120.0~~
~~90.0~~ / 1.0

X130X50

X140X55

X150X60

X160X65

X170X70

X180X75

X190X80

0 1 2 3 4 5 6 7 8 9 10 11 12

VELOCITY TAPE

OPR-F201-HFP-79

MSB-20-2-79

H-9821

000070 0 0000 0001 000 125500 009821
000230 0 0002
300400 0 0004
999999 0 0000

Replaces C&GS Form 567.

NONFLOATING AIDS ~~ON LAND MARKS FOR CHARTS~~U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

ORIGINATING ACTIVITY

- ☒ HYDROGRAPHIC PARTY
☐ GEODETIC PARTY
☐ PHOTO FIELD PARTY
☐ COMPILATION ACTIVITY
☐ FINAL REVIEWER
☐ QUALITY CONTROL & REVIEW GRP.
☐ COAST PILOT BRANCH
(See reverse for responsible personnel)

REPORTING UNIT
(If field party, ship or office)

HSB-HFP-4

LOCALITY

North Carolina Pamlico Sound

DATE

9/14/80

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

OPR PROJECT NO.

JOB NUMBER

SURVEY NUMBER

DATUM

F201-HSB-79

N/A 1927

POSITION

DESCRIPTION

(Record reason for deletion of landmark or aid to navigation.
Show triangulation station names, where applicable, in parentheses)

LATITUDE

D.M. Meters

LONGITUDE

D.P. Meters

OFFICE

FIELD

CHARTS
AFFECTED

DAYBEACON

HOG ISLAND ~~SHOAL~~ DAYBEACON
RED TRIANGLE ON PILE MARKED "2A"
P.S. # 2056

35 20

02.924

76 02

07.213

#255

HYDRO/ARGO
APRIL 1980

11555

DAYBEACON

FAR CREEK CHANNEL LT. "1", LL #4269
GREEN SQUARE ON DOLPHIN MARKED "1"
P.S. # 379

35 30

26.499

75 56

58.739

#445

HYDRO/ARGO
APRIL 1980

11555

LIGHT

GIBBS SHOAL LIGHT FL W 4 SEC LL #4272
GREEN SQUARE ON DOLPHIN

35 27

26.039

75 55

53.285

HYDRO/ARGO
APRIL 1980

11555

LIGHT

GULL SHOAL LIGHT FL W 4 SEC LL #4273
BLACK & WHITE DAYMARK ON SKELTON
STRUCTURE
(GULL SHOAL LIGHTHOUSE, 1934) 3rd Order

35 21

57.423

75 57

28.607

#555

HYDRO/ARGO
APRIL 1980

11555

Ref 1-1207(82)

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Lt. David A. Waltz, NOAA
POSITIONS DETERMINED AND/OR VERIFIED	Lt. David A. Waltz, NOAA
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	<div> <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify) </div> <div>FIELD ACTIVITY REPRESENTATIVE</div> <div>OFFICE ACTIVITY REPRESENTATIVE</div> <div> <input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE </div>
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 (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
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.	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.

NOAA FORM 76-40 (8-74)										U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION										ORIGINATING ACTIVITY																													
Replaces C&GS Form 567.										LANDMARKS FOR CHARTS										<input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)																													
TO BE CHARTED		REPORTING UNIT (Field Party, Ship or Office)		STATE		LOCALITY		DATE		The following objects HAVE <input checked="" type="checkbox"/> HAVE NOT <input type="checkbox"/> been inspected from seaward to determine their value as landmarks. OPR PROJECT NO. JOB NUMBER SURVEY NUMBER DATUM										METHOD AND DATE OF LOCATION (See instructions on reverse side)										CHARTS AFFECTED																			
TO BE REVISED		HSB-HFP-4		North Carolina		Pamlico Sound																																											
TO BE DELETED																																																	
F201-HSB-79										H-9821										N/A 1927																													
CHARTING NAME		DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)		LATITUDE ° / ' " D.M. Meters		LONGITUDE ° / ' " D.P. Meters		POSITION																																									
TANK		WATER TANK		35 30		28.09		76 00		22.50										HYDRO/SEXTANT APRIL 1980										11555																			
GRAIN ELEVATOR		GRAIN ELEVATOR		35 30		28.89		75 59		47.68										HYDRO/SEXTANT APRIL 1980										11555																			
RADIO TOWER		SINGLE RADIO TOWER SUPPORTED BY GUY WIRES. APPROX. 500 FT HIGH		35 28		59.72		76 00		52.48										HYDRO/SEXTANT APRIL 1980										11555																			

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Lt. David A. Waltz, NOAA
POSITIONS DETERMINED AND/OR VERIFIED	Lt. David A. Waltz, NOAA
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	
<div> <div> <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify) </div> <div> FIELD ACTIVITY REPRESENTATIVE OFFICE ACTIVITY REPRESENTATIVE </div> </div> <div> <input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE </div>	
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64, FIELD (Cont'd))	
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	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
FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field identified 6 - Theodolite 7 - Planetable 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.	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.

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)

CORRECTIONS IN FEET, FATHOMS

NOAA FORM 75-21
(10-72)

U.S. DEPARTMENT OF COMMERCE
NOAA
NATIONAL OCEAN SURVEY

VELOCITY CORRECTIONS

Ship NOAA LAUNCH 1255

LT. DAVID A. WALTER

Comdg.

These corrections are to be used

between 24 APRIL 1979 and 18 APRIL 1980

in the locality PAMLICO SOUND, NC

for hydrographic surveys Nos. HSB-20-2-79 H-9821

CORRECTION IN FEET

+10 0.0 +10

DEPTH IN FEET

DEPTH IN FATHOMS

SEE BAR CHECK ABSTRACT
FOR TABULATION OF PLOTTED DATA

✓DAW

(For deep water add a 0 to these figures)

SIGNAL TAPE PRINTOUT HSB-20-2-79 H-9821

006	2	35	15	47664	075	45	38576	139	0000	000000	OLIVER REEF LT. (1978)
015	2	35	13	00797	075	40	41434	139	0000	000000	HATTERAS WATER TANK (1978)
016	2	35	15	17025	075	31	15980	139	0000	000000	CAPE HATTERAS LT. ^M (1938) 1933
019	2	35	11	50893	075	43	57448	139	0000	000000	HATTERAS INLET LOOKOUT TOWER (1978)
101	2	35	35	12464	075	28	07683	250	0000	165270	H-2-NC-77 (1977)
102	2	35	21	17568	075	30	22843	250	0000	165270	H-3-NC-77 (1977)
103	2	35	12	28207	075	42	22736	250	0000	165270	H-1-NC-79 (1979)
111	2	35	50	42482	075	33	49054	250	0000	164800	ARGO NAGS HEAD (1979)
112	2	35	12	25409	075	42	16990	250	0000	164800	H-50-NC-79 (1979)
113	2	35	50	42482	075	33	49054	250	0000	164860	ARGO NAGS HEAD (1979)
114	2	35	12	25409	075	42	16990	250	0000	164860	H-50-NC-79 (1979)

SEE HYDROGRAPHIC SURVEYS BRANCH SUPPORT SECTION (BOB DECROIX)
FOR VERIFICATION OF ABOVE G.P.'S. / RHW



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

OCT 12 1982

C351:SJV

TO: CAM - Richard H. Houlder

FROM: C3 - C. William Hayes

SUBJECT: H-9821 (1979-1980), North Carolina, Pamlico Sound, Juniper Swamp
Point to Southwest of Gull Shoal, Report of Compliance with
Project Instructions

The smooth sheet and Descriptive Report for the subject survey have been examined. This survey, except as noted in the Quality Control Report, dated March 13, 1982 (copy attached), and the Hydrographic Survey Inspection Team Report, dated October 30, 1981, is complete and adequate for the purposes intended and is in compliance with Project Instructions OPR-F201-HSB-79, dated August 3, 1979.

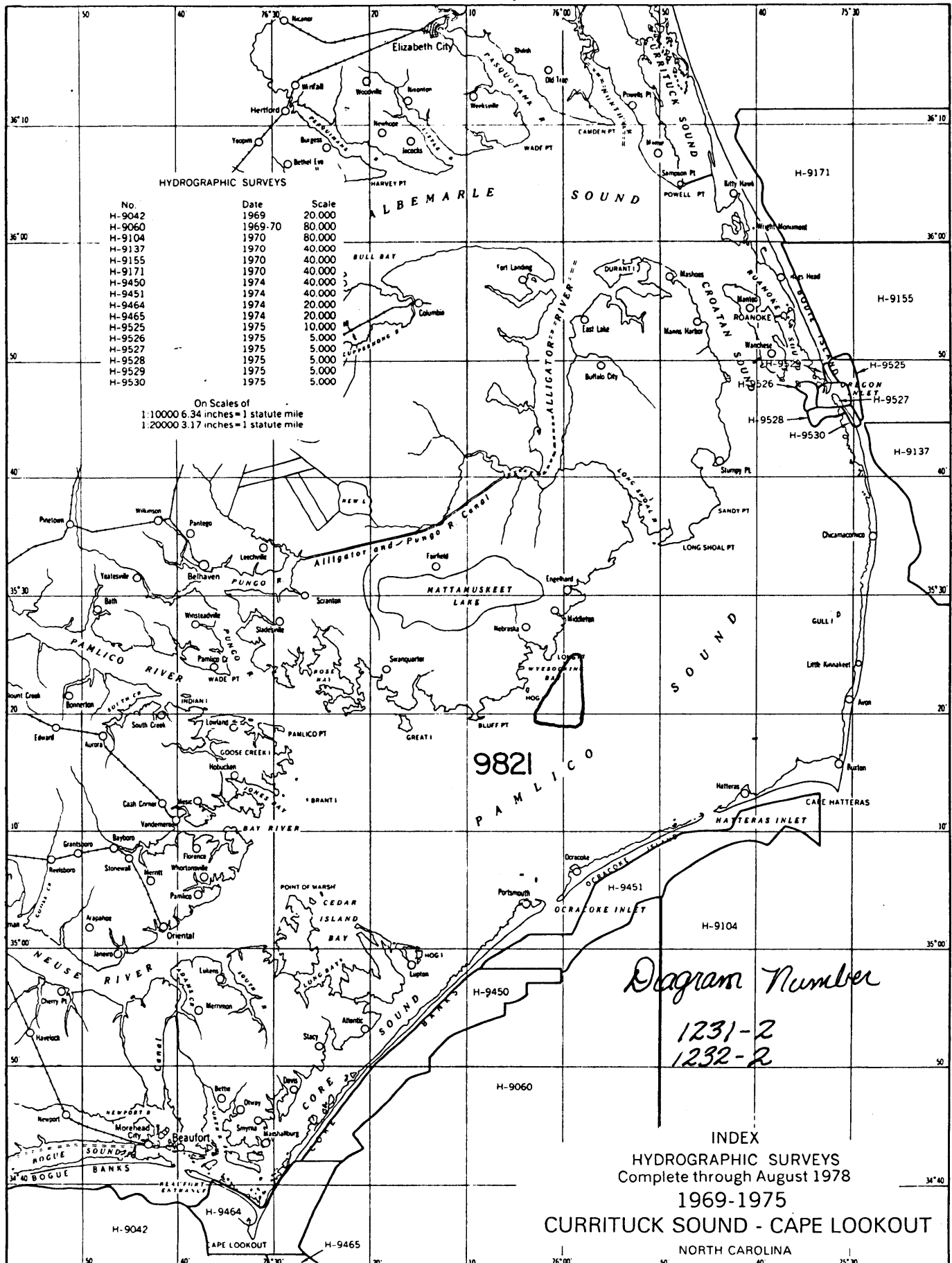
Attachment

cc:
C352 w/o att.



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

Hydrographic Index No. 71 G



RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO.

H-9821

INSTRUCTIONS

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

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

[illegible]