

Note Pages 52 and 54 were added to the report to clarify portions of insert 431 (4 of 6) and (5 of 6). They are not pages in the original document.

F00431

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Field Examination

Field No. AHP-10-1-97

Registry No. F00431

LOCALITY

State South Carolina

General Locality Port Royal Sound

Locality Hilton Head to Beaufort

1997

CHIEF OF PARTY
LT J. A. Illg, NOAA

LIBRARY & ARCHIVES

DATE AUG 24 1998

HYDROGRAPHIC TITLE SHEET

F88431
~~FE-431~~

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.

AHR 10-1-97

State South CarolinaGeneral locality Port Royal SoundLocality Hilton Head to BeaufortScale 1:10,000Date of survey 01/08/97—02/25/97Instructions dated 10-4-97Project No. OPR-G352-AHPVessel 0519Chief of party Lt James IllgSurveyed by DBE / RWR / PW *Soundings taken by echo sounder, hand lead, ~~pole~~ Innerspace Mod#448, and leadlineGraphic record scaled by DBE / RWR / PWGraphic record checked by DBE / RWR / PW

Protracted by

HP DesignJet 350C
Automated plot by HDAPS on Brunning plotterVerification by Atlantic Hydrographic Section, Norfolk, VASoundings in ~~Meters~~ ^{feet} ~~feet~~ at MLLW MLLWREMARKS: *= DBE : David B. Elliott ; RWR : Robert W. Ramsey Jr. ; PW: Philip Wolf

Notes in red in the Descriptive Report were
made during office processing

Awois and SURR 8/98 RWD

SOUNDINGS IN FEET

UNITED STATES COAST AND GEODETIC SURVEY
NATIONAL TIDE DATUM
PORT ROYAL SOUND, SOUTH CAROLINA
PORT ROYAL SOUND AND INLAND PASSAGES
SOUNDINGS IN FEET
PORT ROYAL SOUND AND INLAND PASSAGES
SOUNDINGS IN FEET

OPR-G352-AHP
Port Royal and Calibogue Sounds, SC

Sheet Layout & Project Limits
All Sheets Are 1:10,000 Scale

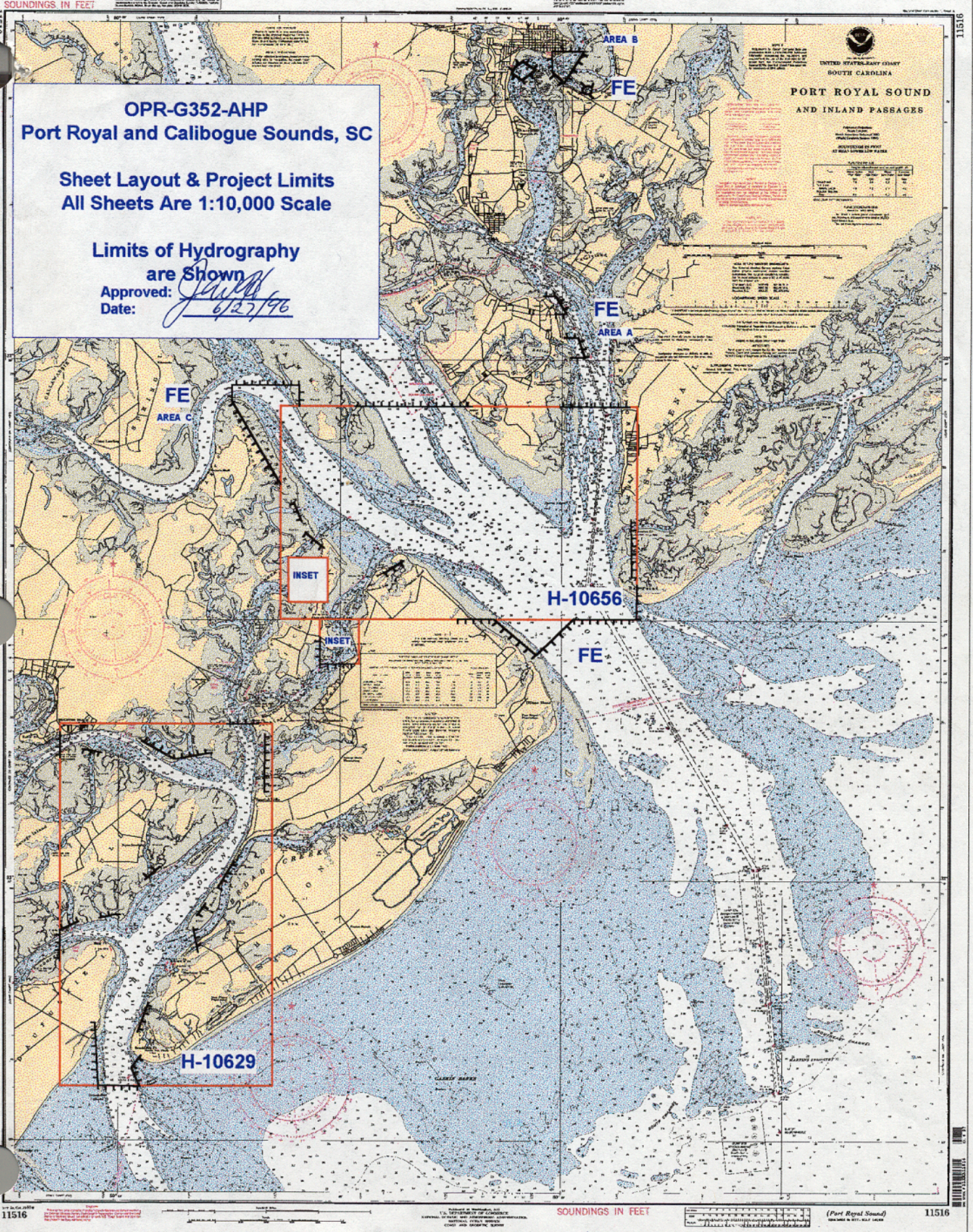
Limits of Hydrography
are Shown

Approved: *[Signature]*

Date: *6/27/96*

PORT ROYAL SOUND
AND INLAND PASSAGES

Chart No.	Scale	Year	Revised
11516	1:10,000	1985	1996

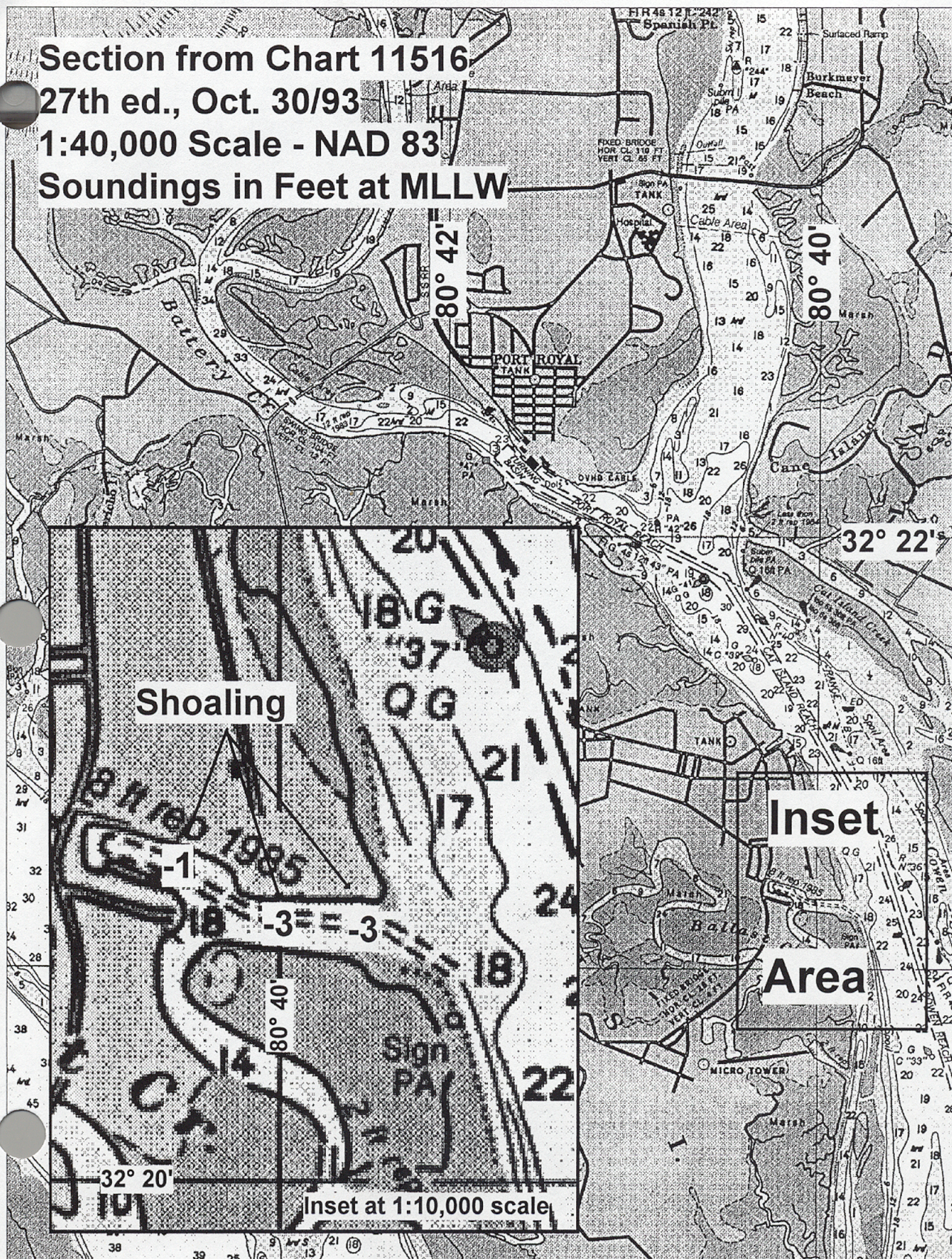


SOUNDINGS IN FEET

UNITED STATES COAST AND GEODETIC SURVEY
NATIONAL TIDE DATUM
PORT ROYAL SOUND, SOUTH CAROLINA
PORT ROYAL SOUND AND INLAND PASSAGES
SOUNDINGS IN FEET
PORT ROYAL SOUND AND INLAND PASSAGES
SOUNDINGS IN FEET

(Port Royal Sound)
SOUNDINGS IN FEET

11516



DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY FE-431

OPR-G352-AHP

FIELD NO. AHP-10-1-97

SCALE: 1:10,000

1997

ATLANTIC HYDROGRAPHIC PARTY TWO

CHIEF OF PARTY: LT James A. Illg, NOAA

A. PROJECT

This survey was conducted according to Hydrographic Project Instructions OPR-G352-AHP, Port Royal and Calibogue Sounds, South Carolina, dated October 4, 1996.

The purpose of project OPR-G352-AHP is to provide contemporary hydrographic survey data for existing nautical charts. This survey is a continuation of the 1995 field season conducted by the NOAA Ship WHITING. The survey of Port Royal Sound will assist the USCG Marine Safety Office (MSO) to develop an oil spill contingency plan. This project responds to requests from the U.S. Army Corps of Engineers (USACE), U.S. Marine Corps (USMC), South Carolina Port Authority, Port Royal Branch Pilots Association, Beaufort Harbor Master, and private marinas at Hilton Head Island.

B. AREA SURVEYED

The areas surveyed as specified by the Project Instructions are "A", "B", "C", "D" and the Skull Creek Inset. The designated areas include portions of the waters around Hilton Head Island, the Chechessee River, the Beaufort River and Skull Creek.

This survey was conducted from January 8, 1997 (DN 008) through February 25, 1997 (DN 056).

C. SURVEY VESSEL

NOAA launch 0519, a 21-foot MonArk, was used to collect all survey data. There were no unusual vessel configurations or problems encountered with the vessel.

D. AUTOMATED DATA ACQUISITION AND PROCESSING *See also The Evaluation Report*

HYPACK version 5.9 was used for on-line data acquisition. A list of all HP-DPS programs and versions used for data processing can be found in the appendix of this report. The NOS programs VELOCITY (Ver. 2.10) and WordPerfect (Ver. 6.1) were also used during this survey.

E. SONAR EQUIPMENT

There were no side scan sonar investigations conducted during FE-431.

F. SOUNDING EQUIPMENT

Two Innerspace model 448 depth sounders, S/Ns 175 and 186, were used to collect all echo soundings on this survey. A standard lead line calibrated in meters, S/N 0519, was used during this survey for comparison with the echo sounder. No problems were encountered with any of the sounding equipment.

G. CORRECTIONS TO ECHO SOUNDINGS

Correctors for the velocity of sound through water were determined from the casts listed below:

<u>Cast No.</u>	<u>Table No.</u>	<u>Deepest Depth(m)</u>	<u>Applicable DN(s)</u>	<u>Cast Position</u>		<u>Day Taken</u>
1	1	13.2	008-015	32/25'36"N	080/39'55"W	013
2	2	12.2	022	32/21'00"N	080/40'00"W	022
3	3	18.5	041-049	32/15'00"N	080/39'25"W	042
4	4	10.6	049-050	32/13'00"N	080/47'12"W	049
5	5	21.7	055-056	32/19'28"N	080/47'05"W	055

The instrument used for determining corrections for the speed of sound through the water column was a Seabird-Seacat Velocity Profiler, model 19-03, S/N 198671-1477. This unit was calibrated by the manufacturer on December 18, 1996. Data quality assurance tests were performed after each cast. Program VELOCITY was used for computing the correctors. Corrections were applied to the sounding plot using the HDAPS REAPPLY program. Copies of the velocity tables and support documentation are in the "Survey Separates." *

The lead line for launch 0519 was calibrated using a steel tape on January 6, 1997. No corrections were necessary. A copy of the calibration form is in the "Survey Separates." *
A static draft of 0.3 meters was applied to the final sounding plot by the HDAPS REAPPLY program. The draft was measured by subtracting the difference from a punch mark on the side of launch 0519, 0.6 meter above the transducer, to the water surface.

Settlement and squat measurements for launch 0519 were taken on January 6, 1997 (DN006). These measurements were conducted in Mackay Creek, north of Calibogue Sound, SC using the level method. The data from this test is included in the "Survey Separates." * Settlement and squat correctors were applied to the final sounding plot using the HDAPS REAPPLY program.

* Filed with the original field records

Field tide reduction of soundings is based on predicted tides from station 867-0870, Fort Pulaski, Georgia. The Product and Services Branch, Datums Section, N/OES231, provided predicted tides for this reference station on diskette for HDAPS. Correctors for five tidal zones on FE-431 were used as designated by the project instructions. The zones were numbered with the following correctors:

	<u>Time (min.)</u>		
	<u>High Water</u>	<u>Low Water</u>	<u>Range Ratio</u>
Zone # 5	+ 30 min	+ 30 min	x1.05
Zone # 7	+ 12 min	+ 12 min	x0.93
Zone # 8A	+ 48 min	+ 48 min	x1.05
Zone # 11	+ 30 min	+ 30 min	x1.02
Zone # 15	+ 54 min	+ 54 min	x1.08

There were periods of extreme water levels noted during hydrography that were weather induced, causing minor sounding differences. These variances will be corrected when smooth tides are applied. All elevations and soundings on survey FE-431 are based on MLLW unless otherwise specified. *Approved tides and zones were applied during office processing*

Approved tide levels were requested from the Product and Services Branch, Datums Section, N/OES23, in a letter dated March 6, 1997. A copy is appended to this report. *

All tides gauges required for survey FE-431 were NGWLMS gauges installed by Atlantic Hydrographic Party and Atlantic Operations Section personnel.

H. CONTROL STATIONS *See also the Evaluation Report*

The horizontal control datum for this project is the North American Datum (NAD) of 1983. The control reference station used for this survey was the USCG DGPS Charleston beacon (Station ID #808), located at 32°45.45357'N, 079°50.57225'W.

I. HYDROGRAPHIC POSITION CONTROL

Differential GPS (DGPS) was used for all hydrographic data acquired on this survey. An Ashtech sensor (S/N 700417B1207) and antenna (S/N 700378A0232) were used as the remote station on launch 0519.

DGPS performance checks were conducted in accordance with FPM 3.4.4 by comparing the DGPS position of the vessel to the position of the following calibration points:

Opening:	Tidal 7	32°25'49.954"N	080°40'09.792"W
Closing:	Calibogue Sound Lt 31	32°10'01.725"N	080°47'45.138"W

* filed with the original field records

To obtain a performance check, the launch was brought alongside the checkpoint and the easting, northing, number of SVs, HDOP, and time of observation were noted on the echogram. These values were then entered into a Lotus spreadsheet which computes the acceptable error margin (based on the HDOP) and also the observed difference between the known and observed position. The table of these comparisons is included in the "Survey Separates." *All of the observed differences fell well within the allowable limit.

J. SHORELINE

There was no photogrammetric source data for this project.

K. CROSSLINES

A total of 12.7 linear nautical miles of crosslines were run, which is approximately 9% of the main scheme hydrography mileage. Crossline soundings agree with the main scheme soundings within 0.2 meter, with the exception of some 0.5 meter differences caused by weather influence on the tides. The application of smooth tides will create a closer agreement in sounding comparison.

L. JUNCTIONS *See also The Evaluation Report*

This survey junctions with the following:

<u>Survey No.</u>	<u>Year</u>	<u>Scale</u>	<u>Junction Area</u>
H-10656	1995	1:10,000	Area's "C", "D", & "Skull Creek."

Junction soundings and soundings from this survey are in close agreement, with differences of 0.2 meters or less, except where noted in Section "O" of this report.

M. COMPARISON WITH PRIOR SURVEYS

See the Atlantic Hydrographic Branch's "Evaluation Report for ~~FE-431~~ ^{FE-431}."

N. ITEM INVESTIGATION REPORTS

There were a total of 18 AWOIS items addressed for this survey. Methods for investigating the AWOIS items were visual investigations and echo sounder investigations.

** filed with the original field records*

N.1

AWOIS NO: 9495

Item Description: Obstruction (Sign PA)

Source: Unknown, CL1149/85--USPS

AWOIS Position: Lat - 32/14/14.00N Lon - 080/45/15.00W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 02/18/97 (DN:049)

Position Numbers: 4475

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: A visual search was conducted at the reported geographic location. A four inch diameter pile was found that supports a sign for the National Wildlife Refuge. A detached position was taken on the pile which was exposed 2.0 meters at the time of positioning.

CHARTING RECOMMENDATION

The charted sign "PA" should be removed from the chart and a sign should be charted at the following location: *Conceal*

Recommended Position: Lat - 32/14/13.7⁷N Lon - 080/45/17.9²W

Recommended Least Depth: Exposed ²1.6m @ MLLW (*Approved Tides*)
(*9ft*)

COMPILATION NOTES

Charted

Applied as

Delete o Sign PA

Chart o Sign

N.2

AWOIS NO: 9496

Item Description: Unknown (Wreck PA)

Source: LNM48/91--7th CGD

AWOIS Position: Lat - 32/14/18.48N Lon - 080/45/03.36W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 02/18/97 (DN:049)

Position Numbers: 4476

Launch Number: 0519

Investigation Used: VS, ES, Loc Know. Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: There was local knowledge obtained on this reported, partially submerged wreck. Mr. Bill Schilling, owner of Schilling's Boat House (803-681-9557) reported that the wreck of the 35 ft sailing vessel was a grounding that was later removed in 1992. Mr. Schilling is a 17 year veteran of Skull Creek and stated that no wreck exists in this area. A detached position was taken to mark the center of the visual search performed by AHP. The water depth was one to two meters and the search was negative.

CHARTING RECOMMENDATION

The wreck "PA" should be removed from the chart. *Concur*

Recommended Position: Lat -

Lon -

Recommended Least Depth:

COMPILATION NOTES

Charted

Applied as

Delete ~~PA~~ PA

N.3

AWOIS NO: 9497

Item Description: Obstruction (Sign PA)

Source: Unknown, CL1167/85--USPS

AWOIS Position: Lat - 32/14/21.00N Lon - 080/44/58.00W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 02/18/97 (DN:049)

Position Numbers: 4478

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: A visual search was conducted at the reported geographic location. A four inch diameter pile was found that supports a sign for the National Wildlife Refuge. A detached position was taken on the pile which was exposed 2.0 meters at the time of positioning.

CHARTING RECOMMENDATION

The charted sign "PA" should be removed from the chart and a sign should be charted at the following location: *Concar*

Recommended Position: Lat - 32/14/21.69N Lon - 080/44/58.1⁴W

Recommended Least Depth: Pile exposed ^{2.5}~~1.7~~m @ MLLW (*Approved Tides*)
(*3 ft*)

COMPILATION NOTES

Charted

Applied as

Delete o Sign PA

chart o Sign

N.4

AWOIS NO: 9498

Item Description: Sounding

Source: CL1247/80--USPS

AWOIS Position: Lat - 32/14/55.00N Lon - 080/45/05.00W

Required Investigation: VS, ES, BD, SD, DI, -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 02/18/97 (DN:049)

Position Numbers: 4482-4579

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: An echo sounder development at ten-meter line spacing was conducted around this geographic location. The shoaling reported between markers "9" and "9A" does exist. As reported the channel is narrow but navigable at this point, provided the mariner stays within the confines of the channel markers. The shoal is on the eastern edge of the channel and has depths of 0.6m (2.0ft) to 1.1m (3.6ft).

CHARTING RECOMMENDATION

The charted "shl rep 1980" should be deleted and the shoalest representative soundings from FE-431 should be charted.

Recommended Position: Lat - 32/14/57.3⁰N Lon - 080/45/07.18^{5.83}W

Recommended Least Depth: 0.6²m @ MLLW (Approved Tides)
(1/2 ft)

COMPILATION NOTES

Charted

Applied as

Delete note "Shl rep 1980"

N.5

AWOIS NO: 9499

Item Description: Obstruction (Sign PA)

Source: CL807/85--USPS

AWOIS Position: Lat - 32/15/03.73N Lon - 080/44/52.38W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 02/18/97 (DN:049)

Position Numbers: 4479

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: A visual search was conducted at the reported geographic location. There were two six inch diameter piles found on a marsh islet that formerly supported a No Wake sign. The sign no longer exists. A detached position was taken on the center of the piles which were exposed 3.0 meters at the time of positioning.

CHARTING RECOMMENDATION

The charted sign "PA" should be removed from the chart and piles should be charted at the following location: *Concur*

Recommended Position: Lat - 32/15/04.0⁶~~3~~N Lon - 080/44/49.91[✓]W

Recommended Least Depth: Piles exposed ^{3.4}~~2.7~~m @ MLLW (*Approved Tides*)
(*11 ft*) *piles 4Ft MHW*

COMPILATION NOTES

Charted

Applied as

Delete Sign PA

chart o piles

N.6

AWOIS NO: 9500

Item Description: Obstruction (Sign PA)

Source: Unknown, CL807/85--USPS

AWOIS Position: Lat - 32/15/04.00N Lon - 080/45/12.00W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 02/18/97 (DN:049)

Position Numbers: 4480

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: A visual search was conducted at the reported geographic location. A four inch diameter pile was found that supports a sign for the National Wildlife Refuge. A detached position was taken on the pile which was exposed 2.0 meters at the time of positioning.

CHARTING RECOMMENDATION

The charted submerged pile "PA" should be removed from the chart and a sign charted at the following location: *Correct*

Recommended Position: Lat - 32/15/04.2⁵~~4~~N Lon - 080/45/13.5⁹~~8~~W

Recommended Least Depth: exposed 1.8^{2.4}~~1.8~~m @ MLLW (Approved Tides)
(8ft)

COMPILATION NOTES

Charted

Applied as

Delete Subm pile PA

Chart 0 Sign

N.7

AWOIS NO: 9502

Item Description: Obstruction (Sign PA)

Source: CL1247/80--USPS

AWOIS Position: Lat - 32/15/30.72N Lon - 080/44/36.38W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 02/18/97 (DN:049)

Position Numbers: 4481

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: A one hundred meter visual and wading search was conducted at this geographic location at low tide. The charted location of this feature is on shore forty meters south of the detached position that designates the center of the search radius. The water depths in this locality range from 0.2m to 1.0m. The area was too shallow for side scan sonar or for bottom dragging. Nothing was found in the area of this item.

CHARTING RECOMMENDATION

The charted sign "PA" should be removed from the chart. *Concur*

Recommended Position: Lat -

Lon -

Recommended Least Depth:

COMPILATION NOTES

Charted

Applied as

Delete sign PA

N.8

AWOIS NO: 9505

Item Description: Sounding (8 ft rep 1985)

Source: CL2097/76--USMC, CL870/85--USMC

AWOIS Position: Lat - 32/20/17.00N Lon - 080/39/50.00W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 01/22/97 (DN:022)

Position Numbers: 1938-1945

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: There were two sounding lines run at ten-meter line spacing across (perpendicular to) the entrance to the USMC recreational yacht basin in addition to the reduced line spacing that covered the reported area. The eight foot reported depth from 1985 is no longer valid. This area was found to be from one to three feet deep. The approach channel leading in from the east now bares to three feet above MLW throughout. This is no longer a navigable waterway except during periods of high water.

CHARTING RECOMMENDATION

The charted "8 ft rep 1985" should be removed from the chart and survey depths from FE-431 should be charted. *Do not Concur*

Recommended Position: AWOIS position above

Recommended Least Depth: N/A

*See section 0.1.a. in the
Evaluation Report*

COMPILATION NOTES

Charted

Applied as

N.9

AWOIS NO: 9506

Item Description: Obstruction (Sign PA)

Source: CL76/78--USPS

AWOIS Position: Lat - 32/20/11.00N Lon - 080/39/46.00W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 01/22/97 (DN:022)

Position Numbers: 2150

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: This feature was found visually while running main scheme hydrography in the area. A detached position was taken on a ten inch diameter wooden pile. The pile reported as sign PA was broken off and found awash at the time of positioning.

CHARTING RECOMMENDATION

The charted sign "PA" should be removed from the chart and a pile should be charted at the following location: *Cod cue*

Recommended Position: Lat - 32/20/10.5²N Lon - 080/39/46.4¹W

Recommended Least Depth: Pile exposed 1.0²m @ MLLW (*Approved Tides*)
(4ft)

COMPILATION NOTES

Charted

Applied as

Delete o sign PA
Chart o pile

N.10

AWOIS NO: 9507

Item Description: Sounding (10 ft rep 1979)

Source: CL781/79--USPS

AWOIS Position: Lat - 32/25/37.00N Lon - 080/41/05.00W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 01/15/97 (DN:015)

Position Numbers: 1848-1890

Launch Number: 0519

Investigation Used: VS, ES, DI

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: An echo sounder development using ten-meter line spacing was performed at this reported geographic location. The charted ten foot report was found to be ~~eleven~~ ^{ten} feet. (*Approved Tides*)

CHARTING RECOMMENDATION

The charted ten foot report should be removed and revised with the soundings found on this survey. *Concur*

Recommended Position: Lat - 32/25/35.12N Lon - 080/41/03.8⁷₆W

Recommended Least Depth: ¹⁰~~11~~ ft @MLLW (3.2 m) (*Approved Tides*)

COMPILATION NOTES

Charted

Applied as

N.11

AWOIS NO: 9508

Item Description: Obstruction (submerged pile/sign PA)

Source: CL781/79--USPS, CL1068/90--USPS

AWOIS Position: Lat - 32/25/35.00N Lon - 080/40/05.00W

Required Investigation: VS, ES, BD, SD, DI -- 50m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 01/15/97 (DN:015)

Position Numbers: 1414

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: The reported obstruction was found visually within the limits of the reported geographic location. A detached position was taken on an 8-inch diameter wooden pile that is serving as a "Slow - No wake sign."

CHARTING RECOMMENDATION

The charted submerged pile "PA" should be removed from the chart and a sign should be charted at the following location:

Recommended Position: Lat - 32/25/3⁵~~2~~.09N Lon - 080/40/04.9²~~7~~W

Recommended Least Depth: exposed ^{5.0}~~3.5~~m @ MLLW (Approved Tides)
(16 ft)

COMPILATION NOTES

Charted

Applied as

~~Delete note "10 ft rep 1979"~~
Delete o Subm pile PA
chart o Sign

N.12

AWOIS NO: 9509

Item Description: Obstruction (Sign PA)

Source: CL781/91--USPS

AWOIS Position: Lat - 32/25/30.00N Lon - 080/40/04.00W

Required Investigation: VS, ES, BD, SD, DI -- 50m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 01/15/97 (DN:015)

Position Numbers: 1413

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: The reported obstruction was found visually within the limits of the reported geographic location. A detached position was taken on an 8-inch diameter wooden pile that is serving as a "Slow - No wake sign."

CHARTING RECOMMENDATION

The charted sign "PA" should be revised to the following location and the "PA" notation deleted: *Correct*

Recommended Position: Lat - 32/25/^{35.49}~~29.97~~N Lon - 080/40/03.⁴⁰~~04~~W
29.88

Recommended Least Depth: Pile exposed ^{5.0}~~3.6~~m @ MLLW corrected for
Approved predicted tides. ^{6.4}~~6.4~~

COMPILATION NOTES

Charted

Applied as

Delete

Chart o Sign

N.13

AWOIS NO: 9510

Item Description: Sounding (4 ft rep 1983)

Source: CL1017/83--CP

AWOIS Position: Lat - 32/25/30.00N Lon - 080/40/02.00W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 01/15/97 (DN:015)

Position Numbers: 1702-1756

Launch Number: 0519

Investigation Used: ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: An echo sounder development using ten-meter line spacing was performed at this reported geographic location. The area reported was found to be seven feet deep. There was however a shoal extending from a marsh islet in the vicinity that does have three and four foot soundings that are more critical and most likely are the true position of this report.

CHARTING RECOMMENDATION

The charted "4 ft rep 1983" should be removed from the chart and representative soundings from FE-431 charted in this area. A three foot should be charted at the following location: *Concur w/ chart representative soundings from present survey. Clarification*

Recommended Position: Lat - 32/25/32.43N Lon - 080/40/02.38W

Recommended Least Depth: 3 ft @ MLLW

COMPILATION NOTES

Charted

Applied as

Delete note "4ft rep 1983"

N.14

AWOIS NO: 9511

Item Description: Unknown (Wreck PA)

Source: LNM30/91--7th CGD

AWOIS Position: Lat - 32/25/12.00N Lon - 080/39/27.00W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 01/15/97 (DN:015)

Position Numbers: 1441

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: There was local knowledge obtained on this feature from Mr. Fleetwood Covington, the Harbor Master for Ladys Island Marina (803-522-0430). The wreck is visible at low tide but is only accessible at high tide. The charted position of this wreck is incorrect, showing it closer to the channel than it actually is. According to Mr. Covington, the wreck is actually 95 meters north of the charted location. Position 1441 was taken at high tide on the wreck. Mr. Covington pointed out the location of this wreck from the upstairs window of the marina office. This wreck is no danger to navigation and is currently a home for otters.

CHARTING RECOMMENDATION

The charted visible wreck "PA" should be removed from the chart, and a visible wreck should be charted at the following location:
concern w/clarification
Do not chart WK, present survey location shows wreck 50 meters inside LUL
Recommended Position: Lat - 32/25/15.0²₃N Lon - 080/39/28.09W

Recommended Least Depth: exposed 1.2² @MLLW (Approved Tides)
(4ft)

COMPILATION NOTES

Charted

Applied as

Delete

is

N.15

AWOIS NO: 9512

Item Description: Unknown (Submerged wreck)

Source: CL1174/84--USPS, CL1068/90--USPS, LNM9/91

AWOIS Position: Lat - 32/25/34.00N Lon - 080/39/58.00W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 01/15/97 (DN:015)

Position Numbers: None

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: There was local knowledge obtained on this feature from Mr. Fleetwood Covington, the Harbor Master for Ladys Island Marina (803-522-0430). According to Mr. Covington, the wreck burnt and sunk at the charted location in 1984. The vessel was hauled off in 1985 and lies behind Ladys Island Marina in Factory Creek. The CL1068/90 from the USPS suggested removing this wreck from the chart as stated in the AWOIS report, however the wreck was revised to submerged. A photo was taken of the wreck lying in the weeds and is included in the survey separates.

CHARTING RECOMMENDATION

The charted submerged wreck "PA" should be removed from the chart. The wreck in its location in Factory Creek does not justify charting. *Concur*

Recommended Position: Lat -

Lon -

Recommended Least Depth:

COMPILATION NOTES

Charted

Applied as

Delete # PA

N.16

AWOIS NO: 9513

Item Description: Obstruction (Bridge Ruins)

Source: H6025B/34

AWOIS Position: Lat - 32/25/36.00N Lon - 080/40/11.00W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 01/15/97 (DN:015)

Position Numbers: 1421 & 1422

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: There was local knowledge obtained on this feature from Captain Harold Chapman of the Beaufort Police Department (803-525-7578). Captain Chapman has done extensive diving in downtown Beaufort and stated the bridge ruins are approximately fifty-meters wide. Captain Chapman also suggested not towing the sidescan sonar in the vicinity of this feature due to rip-rap along the edges of the bridge ruins. The charted location of the bridge ruins are accurately portrayed as charted. There were two positions taken on this item. One position at the offshore end and one at the onshore end. A photo was taken at the onshore position and is included with the survey separates.

CHARTING RECOMMENDATION

The charted bridge ruins should remain as charted. *Concur*

Recommended Position: Lat - 32/25/36.1³2N Lon - 080/40/11.0⁴8W
32/25/31.84N 080/40/11.15W

Recommended Least Depth: 4.7²m @ MLLW (14ft) (*Approved Tides*)

COMPILATION NOTES

Charted

Applied as

N.17

AWOIS NO: 9536

Item Description: Obstruction (piles)

Source: CL1444/70--USPS, CL1451/73--USPS

AWOIS Position: Lat - 32/17/27.00N Lon - 080/38/49.00W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 01/22/97 (DN:022)

Position Numbers: 2151 & 2152

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: These features were found visually at the reported geographic location. A detached position was taken on an eight-inch and a ten-inch diameter wooden pile. The piles were in poor condition. The southern pile was broken at the surface (exposed 0.1m) and the northern pile was found just below the surface (awash) at the time of positioning.

CHARTING RECOMMENDATION

The charted submerged piles should be retained at the following location: *Concur w/Clarification*

Re-use subm piles to visible piles. Also use the present survey's location

Recommended Position: Lat - 32/17/25.80N Lon - 080/38/49.52W
32/17/28.11N 080/38/48.77W

Recommended Least Depth: Piles exposed 0.8m @ MLLW (3ft) *0.7m @ MLLW (3ft) Approved Tides*

COMPILATION NOTES

Charted

Applied as

Delete 8 subm piles

Add 8 piles

N.18

AWOIS NO: 9537

Item Description: Obstruction (Piles PA)

Source: Unknown

AWOIS Position: Lat - 32/18/18.00N Lon - 080/38/45.00W

Required Investigation: VS, ES, BD, SD, DI -- 100m radius

Charts Affected: 11507, 11513, 11516, 11518

INVESTIGATION

Date(s)/DN(s): 01/22/97 (DN:022)

Position Numbers: 2153

Launch Number: 0519

Investigation Used: VS, ES

Water Visibility: 2m

Position Determined By: DGPS

Investigation Summary: This feature was found visually at the reported geographic location. A detached position was taken in the center of two, eight-inch diameter wooden piles. The piles reported as piles PA were in fair condition and were six meters apart.

CHARTING RECOMMENDATION

The charted piles should be revised to the following location and the "PA" notation deleted: *Concave*

Recommended Position: Lat - 32/18/17.54N Lon - 080/38/44.2²W

Recommended Least Depth: Piles exposed 2.2m @ MLLW (*Approved Tides*)
(7ft)

COMPILATION NOTES

Charted

Applied as

Delete 0 Piles PA

Add 0 Piles

O. COMPARISON WITH THE CHART

Comparison was made with the following charts:

<u>Chart No.</u>	<u>Edition</u>	<u>Edition Date</u>
11516	27th ED	Oct 30/93
11507	28th Ed	Aug 3/96
11518	29th Ed	May 11/96

FE Area "A": (sheet 2 of 6)

- A major scour was found offshore of and parallel to the Naval Investigative Service pier at 32°21'00"N, 080°40'08"W, with depths 10 to 15 feet deeper than those currently charted. *Concur*
- Depths along the western edge of the channel through "Cat Island Reach" were found to agree within 1 foot of those currently charted.
- The cut charted between the "N.I.S." pier and the "Four Winds Club" at 32°21'06"N, 080°40'12"W, was found to bare at low water. This cut was an old tidal dry dock, and is not navigable at low water. *Concur*
- The controlling depth within the surveyed portion of "Cat Island Reach" was found to be 26.5 feet at 32°20'57.62"N, 080°39'56.88"W (PN 2687). Shallowest tabulated controlling depth listed on the chart is 23.6 feet for the left inside quarter. *Concur*
- The "8 ft rep 1985" at the USMC boat basin at 32°20'17.06"N, 080°39'53.47"W was found to be much shallower. This area was found to be one to ^{four} three feet deep, with the approach channel leading in from the east now baring to three feet above MLLW *Concur* throughout. This is no longer a navigable waterway except during periods of MHW (see Awois 9505). A Danger To Navigation Letter was submitted. A copy is appended to this report. *See also section O.1.a. in The Evaluation Report*
- The currently charted soundings adjacent to and offshore of the approach to the USMC boat basin were found to agree within one foot.

FE Area "B": (sheet 1 of 6)

- Erosion of the marsh islands in the vicinity of 32°25'34"N, 080°40'19"W is depicted on the final sounding plot as a dashed red line.
- Soundings within the surveyed area agree to within one foot of those currently charted with the exceptions addressed below.

- The charted six-foot shoal addressed as area "B" on page 16 of the project instructions was found to exist. The offshore end has migrated southwest to $32^{\circ}25'43.12''$ N, $080^{\circ}40'04.40''$ W (PN 1007), with a depth of 4 feet (1.3m). ³ *Concur*
- The charted "4 ft rep 1983" (see Awois 9510) was found to be seven feet. There is a shoal extending from a marsh islet in the vicinity that does have three and four foot soundings deemed more critical and most likely the true position of this report. A three foot sounding was located 50 meters northeast of the four foot report at $32^{\circ}25'32.43''$ N, $080^{\circ}40'02.38''$ W (PN 1023).
- The charted "10 ft rep 1979" (see Awois 9507) was found to be ¹⁰ ~~11~~ feet at $32^{\circ}25'35.12''$ N, $080^{\circ}41'03.86''$ W (PN 1878). *Concur*
- An isolated 12-foot sounding was located near mid-channel at $32^{\circ}25'29.35''$ N, $080^{\circ}40'57.79''$ W (PN 595). This 12-foot sounding lies 50 meters south of a charted 12-foot sounding. The area of the charted 12-foot sounding now shows 13- to 15-foot depths. ⁶ *Concur*

FE Area C: (sheet 5 of 6)

- A charted shoal at $32^{\circ}18'39''$ N, $080^{\circ}46'18''$ W was verified by this survey. A four-foot sounding was found at $32^{\circ}19'10.64''$ N, $080^{\circ}46'43.58''$ W (PN 5697), on the northwest end of the shoal, which agrees with the chart. The shoal extends southeastward, baring one foot at $32^{\circ}18'39.13''$ N, $080^{\circ}46'18.85''$ W (PN 6584). The shoal continues to be exposed to the southeastern limit of the survey area, at $32^{\circ}18'19.42''$ N, $080^{\circ}46'02.09''$ W (PN 6851). This axis of this shoal was found much longer than currently charted. This shoaling was also found in data acquired on H-10656 from 1995. *Concur*
- The platform charted at $32^{\circ}19'18''$ N, $080^{\circ}47'31''$ W as PA was found 240 meters southwest of the charted location. It is recommended that the currently charted platform PA, be removed from chart 11516, and a platform be applied to the chart at $32^{\circ}19'12.90''$ N, $080^{\circ}47'39.03''$ W (PN 7024) with an elevation of two meters above MLLW. (7 ft) *Concur*
- The shoaling reported in CL290/96 for the Chechessee River does not exist. The information on the shoaling was furnished to the field party on the chart mark-up. The reported area is in the vicinity of $32^{\circ}19.5''$ N, $080^{\circ}47.0''$ W. The area was found to have depths in agreement with the currently charted depths of 18 to 30 feet.
- In general, all soundings with the exception of the previously mentioned "offshore baring shoal" were found to agree within 1 to 2 feet of those currently charted. The soundings inshore of this shoal around $32^{\circ}19'00''$ N, $080^{\circ}46'50''$ W, were found to be deeper than those currently charted by 3 to 7 feet. These surveyed soundings agreed with those found by H-10656, 1995. *Concur*
see also section C.1.6. in The Evaluation Report

FE Area D: (Sheet 4 of 6)

- The charted 15-foot sounding at 32°15'46"N, 080°40'39"W, no longer exists. Soundings in this area were found to be 26⁴ feet at PN 4406. *CONCUR*
- The charted 27-foot sounding at 32°14'^{15'04"}~~56~~"N, 080°40'⁴⁰~~27~~"W, no longer exists. A 25-foot sounding was located at PN 3477 on the shoal extending from "Dolphin Head". *CONCUR*
- The charted 26-foot sounding at 32°14'50"N, 080°40'19"W, no longer exists. Soundings in this area were found to be 36 feet near the southeast offshore point of the shoal extending from "Dolphin Head" (PN 4324). *CONCUR*
- The charted 28-foot sounding at 32°14'45"N, 080°40'24"W no longer exists. Soundings in this area were 41 feet (PN 3262). *CONCUR*
- In general the survey soundings were found to be three to eight feet deeper than those currently charted east of 080°40'30"W and south of 32°14'40"W, the junction area with H-9360 from 1974. *CONCUR*

Skull Creek area: (Sheet 6 of 6)

- The survey soundings agree within one foot with those currently charted.

The hydrographer recommends charting representative depths from this survey for all shoals and developments.

P. ADEQUACY OF SURVEY *See also The Evaluation Report*

This is a complete field examination survey of the area required in the Project Instructions and is adequate to supersede all prior surveys within the common area.

Q. AIDS TO NAVIGATION

The following non-floating aids to navigation are maintained by the U. S. Coast Guard and lie within the survey area. All of the aids serve their intended purpose. Positions of all aids to navigation were determined by DGPS during hydrographic operations. Equipment and personnel resources were not available for obtaining third-order positions of all the non-floating navigational aids. A comparison of the positions of the fixed aids located on this survey was made with the charted and USCG Light List, Volume 3, 1996 positions. The results are shown in the following table:

Position No.	Name and (Light List No.)	Light List Position	Survey Position	Distance/Bearing from Charted Position
1408	LT "235" 31940	32/26'00"N 080/39'30"W	32/26'02.52"N 080/39'31.36"W	43m / SE
1410	Dbn "G237" 31945	none	32/25'38.33"N 080/39'48.85"W ₆	65m / SE
1411	Dbn "G1" 31950	32/25'30"N 080/40'06"W	32/25'31.53"N ⁴ 080/40'01.82"W ₃	20m / SE
1412	Dbn "G3" 31955	none	32/25'18.33"N 080/39'44.04"W	50m / SE
1424	Dbn "G239" 31960	none	32/25'36.71"N 080/40'28.27"W ₈	35m / SSW
1426	LT "240" 31965	none	32/25'38.19"N 080/41'05.53"W ₄	On Station
1429	LT "241" 31970	none	32/25'05.03"N 080/41'00.96"W ₇	25m / WNW
1430	Dbn "G241A" 31975	none	32/24'55.08"N ⁹ 080/40'55.65"W	45m / SE

R. STATISTICS

<u>Description</u>	<u>Quantity</u>
Total Number of Positions	7024
Total Linear Nautical Miles of Hydrography	182
Total Linear Nautical Miles of Cross Lines	13
Total Linear Nautical Miles of Development	9
Total Linear Nautical Miles of (SSS) Hydrography	0
Square Nautical Miles of Hydrography	4
Days of Production	11
Detached Positions	39
Bottom Samples	23
Velocity Casts	5

S. MISCELLANEOUS

Bottom samples were taken as directed in Section 6.7 of the Project Instructions. Bottom sample positions and descriptions can be found on the DP editor printout appended to this report. The Oceanographic Log Sheet-M, NOAA Form 75-44, is included in the "Survey Separates." * Bottom samples were submitted to the Smithsonian Institution as requested in the Project Instructions.

Secchi disk observations were not acquired on this survey due to the continually poor water clarity.

No anomalous tidal currents were observed within the survey limits.

T. RECOMMENDATIONS

No additional field work was identified after field processing was completed. Specific recommendations are made on the Item Investigation Reports in section N, and in section O of this report.

U. REFERRAL TO REPORTS

Title

Descriptive Reports for
H-10606 and H-10623

Transmittal Information

Atlantic Hydrographic Branch
N/CS331, Norfolk, VA (1995)

Submitted by: Robert W. Ramsey Jr.

Atlantic Hydrographic Party

* filed with the original field records

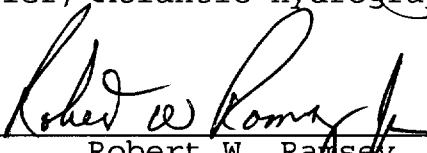
APPROVAL SHEET
Field Examination Survey
OPR-G352-AHP
AHP-10-1-97
FE-431
1997

This field examination survey was conducted in accordance with the project instructions for OPR-G352-AHP, the Hydrographic Manual, the Hydrographic Survey Guidelines, and the Field Procedures Manual. All reports, records, and survey sheets were reviewed by the Launch Hydrographer-in-charge. The descriptive report was reviewed and approved by the Chief of Party. The Chief of Party did not directly supervise any part of this survey

This survey is a complete field examination survey for the area described in Section B of this report.



LT James A. Illg, NOAA
Chief, Atlantic Hydrographic Party



Robert W. Ramsey, Jr.
Launch Hydrographer-in-charge

CONTROL STATIONS as of 3 Mar 1997

No	Type	Latitude	Longitude	H	Cart	Freq	Vel	Code	MM/DD/YY	Station Name
001	0	032:45:27.212	079:50:34.335	0	0	0.0	0.0		12/02/96	USCG BEACON CHARLESTON, SC(016)
002		032:25:49.954	080:40:09.792	0	0	0.0	0.0		01/10/97	TIDAL 7, Cal Point
003		032:10:01.725	080:47:45.138	0	0	0.0	0.0		02/13/97	CALIBOGUE SOUND LT 31, Cal Pt



**U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

Atlantic Hydrographic Party
439 West York St.
Norfolk, VA 23510-1114

March 6, 1997

Commander (oan)
U.S. Coast Guard District Seven
Brickell Plaza Federal Bldg.
909 SE First Ave.
Miami, Florida 33131-3050

**ADVANCE
INFORMATION**

Dear Sir:

While conducting a hydrographic survey of Port Royal Sound, South Carolina (FE-431, project OPR-G352-AHP), the channel into the USMC Yacht Club on Parris Island was found much shoaler than charted. The channel area was found to expose as much as three feet, making this channel accessible only at high tide. I recommend this information be included in the Local Notice to Mariners. The positions are based on NAD 83 datum and the soundings have been reduced to Mean Lower Low Water (MLLW) using predicted tides. The soundings were located using Differential GPS.

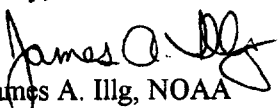
This information affects the following charts:

<u>CHART NO.</u>	<u>EDITION</u>	<u>DATE</u>
11516	27th	Oct. 30/93

<u>DESCRIPTION</u>	<u>NAD 83 POSITION</u>	<u>DEPTH (ft)</u>
Sounding	32°20'17.06"N 080°39'53.47"W	-3
Sounding	32°20'18.86"N 080°40'01.29"W	-3
Sounding	32°20'22.75"N 080°40'09.27"W	-1

This is advance information which is subject to office review. A chart section, showing the location of these dangers, is attached. Questions concerning this report should be directed to me at (410) 437-9811.

Sincerely,


LT James A. Illg, NOAA
Chief, Atlantic Hydrographic Party

Attachment

cc: N/CS26
N/CS33
DMAHTC



GEOGRAPHIC NAMES

FE-431

Name on Survey	A CHART NO. 17516-11519	B ON PREVIOUS SURVEY	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RANDOMLY ATLAS	H U.S. LIGHT LIST	K
BALLAST CREEK	X		X						1
BEAUFORT	X		X						2
BEAUFORT RIVER	X		X						3
BOBB ISLAND	X		X						4
CHECHESSEE RIVER	X		X						5
COLLETON NECK	X		X						6
COLLETON RIVER	X		X						7
COWEN SPIT	X		X						8
DAWS ISLAND	X		X						9
FACTORY CREEK	X		X						10
FOOT POINT	X								11
FORT FREMONT	X		X						12
HILTON HEAD	X		X						13
HILTON HEAD ISLAND	X		X						14
PARRIS ISLAND	X		X						15
PINCKNEY ISLAND	X		X						16
PORT ROYAL SOUND	X		X						17
SEABROOK LANDING	X		X						18
SKULL CREEK	X		X						19
SPRING ISLAND	X		X						20
WHITEHALL POINT	X		X						21
									22
									23
									24
									25

Approved

Chief Geographer

FEB 10 1998



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: August 11, 1997

HYDROGRAPHIC BRANCH: Atlantic

HYDROGRAPHIC PROJECT: OPR G352-AHP

HYDROGRAPHIC SHEET: FE-431

LOCALITY: Port Royal and Calibogue Sounds.

TIME PERIOD: January 8 - February 25, 1997

TIDE STATION USED: 866-7999 Beaufort, S.C.

Lat. 32° 25.8'N Lon. 80° 40.2'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 m

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 2.338 m

TIDE STATION USED: 866-8918 Bobb Island, Hilton Head, S.C.

Lat. 32° 16.0'N Lon. 80° 44.2'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 m

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 2.155 m

REMARKS: RECOMMENDED ZONING

Use zone(s) identified as: SC17, SC18, SC19, SC20, SC21,
SC22, SC23, SC24, SC25, SC33,
SC34, SC47, SC48 & SC50

Refer to attachment(s) for zoning information.

Note: The time series data provided with this tide note (for the 1997 survey) are tabulated in **Metric units (meters)** and on Greenwich Mean Time. These data are referenced to **Mean Lower Low Water**, as indicated by the MLLW = 0.000 provided above.



CHIEF, TIDAL ANALYSIS BRANCH



08/12/98

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: F00431

NUMBER OF CONTROL STATIONS 2

NUMBER OF POSITIONS 7024

NUMBER OF SOUNDINGS 7024

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	289	09/19/97
VERIFICATION OF FIELD DATA	559.50	06/15/98
EVALUATION AND ANALYSIS	163.50	
FINAL INSPECTION	77	07/30/98
COMPILATION	51	08/11/98
TOTAL TIME	1152	
ATLANTIC HYDROGRAPHIC BRANCH APPROVAL		07/30/98

N/CS33-73-98

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY
(Check):☐ ORDINARY MAIL ☐ AIR MAIL☐ REGISTERED MAIL ☒ EXPRESS☐ GBL (Give number) _____

DATE FORWARDED

13 AUGUST 1998

NUMBER OF PACKAGES

ONE TUBE & ONE BOX

TO:

Chief, Data Control Group, N/CS3x1
NOAA/National Ocean Service
Station 6815, SSMC3
1315 East-West Highway
Silver Spring, Maryland 20910-3282

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

F00431

SOUTH CAROLINA, PORT ROYAL SOUND, HILTON HEAD TO BEAUFORD

(ONE) Tube containing the following:

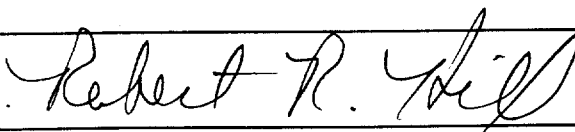
- 1 SMOOTH SHEET (F00431)
- 5 Composite Drawings on paper for chart #11516
- 1 H-Drawing on mylar for chart #11516
- 5 H-Drawing blowups on paper for chart 11516

(ONE) Box containing the following:

- 1 Descriptive Report for F00431
- 1 Drawing History Form #76-71 for chart #11516

FROM: (Signature)

Robert R. Hill Jr.

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Atlantic Hydrographic Branch
N/CS33
439 West York Street
Norfolk, VA 23510-1114

**ATLANTIC HYDROGRAPHIC SECTION
EVALUATION REPORT FOR F00431 (1997)**

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

The following software was used to process data at the Atlantic Hydrographic Branch:

Hydrographic Processing System
MicroStation 95, version 5.05
SiteWorks, version 2.1
NADCON, version 2.10
I/RAS B, version 5.01

The smooth sheet was plotted using a Hewlett Packard DesignJet 350C plotter.

H. CONTROL STATIONS

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83). The smooth sheet has been annotated with ticks showing the computed mean shift between the NAD 83 and the North American Datum of 1927 (NAD 27).

To place this survey on the NAD 27 datum, move the projection lines 0.711 seconds (21.90 meters or 2.19 mm at the scale of the survey) north in latitude and 0.613 seconds (16.04 meters or 1.60 mm at the scale of the survey) east in longitude.

All geographic positions listed in this report are on the NAD 83 unless stated otherwise.

L. JUNCTIONS

H10656 (1995) 1:10,000

The smooth sheet for survey H10656 (1995) is archived at National Ocean Service (NOS) headquarters, Silver Spring, Maryland and a standard junction could not be made. In this case, the note "ADJOINS" has been shown on the present survey smooth sheets 4, 5 and 6 of 6. Any adjustments to the depth curves in the junctional areas will have to be made on the chart during compilation.

Present survey depths are in harmony with the charted hydrography.

M. COMPARISON WITH PRIOR SURVEYS**Hydrographic**

H05117	(1931)	1:10,000
H05130	(1931)	1:10,000
H05518	(1933-34)	1:10,000
H05519	(1933)	1:10,000
H05562	(1934)	1:10,000
H05564	(1934)	1:10,000
H06025b	(1934-36)	1:10,000
<u>H09360</u>	<u>(1974)</u>	<u>1:10,000</u>

1) H05117 (1931) covers a portion of the present survey in the vicinity of Latitude 32°15'00"N, Longitude 80°45'00"W (Sheet 6 of 6). Prior survey depths show a general trend of being within plus or minus 2 feet (0⁶ m) of present survey depths.

2) H05130 (1931), H09360 (1974) and H05564 (1934) taken together covers a portion of the present survey in the vicinity of Latitude 32°15'00"N, Longitude 80°41'00"W (Sheet 4 of 6). Prior survey depths generally vary plus or minus ±2 feet (0⁶ m) from present survey depths.

3) H05518 (1933-34) covers a portion of the present survey in the vicinity of Latitude 32°21'00"N, Longitude 80°40'00"W (Sheet 2 of 6). Prior survey depths generally vary plus or minus ±2 to 3 feet (0⁶ to 1 m) from present survey depths. Offshore depths agree better than inshore depths. A major exception to this is the Ballast Creek area, which has shoaled considerably.

4) H06025b (1934-36) covers a portion of the present survey in the vicinity of Latitude 32°25'30"N, Longitude 80°40'30"W (Sheet 1 of 6). Prior survey depths generally vary plus or minus ±1 to 2 feet (0³ to 0⁶ m) from present survey depths.

5) H05519 (1933) and H05562 (1934) were not available for comparison with the present survey.

Differences between the present and prior surveys can be attributed to natural changes in the bottom configuration, cultural change, and/or improved hydrographic surveying methods.

The present survey is considered adequate to supersede the prior surveys within the common area, except as noted in this

report.

- O. COMPARISON WITH CHARTS 11516 (28th Edition, Apr. 12/97)
11519 (10th Edition, Jun. 17/95)
11507SC (28th Edition, Aug. 3/96)
11518SC (29th Edition, May 11/96)
11513 (22nd Edition, Jul. 12/97)

1. Hydrography

The charted hydrography within the common area originates with the previously addressed prior surveys, miscellaneous sources and from sources not readily available. The previously addressed prior surveys require no further consideration. Attention is directed to the following:

a. Automated Wreck and Obstruction Information System (AWOIS) Item #9505, a charted note, 8 ft rep 1985, in the vicinity of Latitude 32°20'17"N, Longitude 80°39'50"W, originates with Chart Letter 870 of 1985 (CL870/85) and was subsequently revised by an unknown source to Shoaling to bare. The present survey data supports the presently charted note. It is recommended that the charted note Shoaling to bare be retained as charted. (Sheet 2 of 6)

b. The charted note Shoaling to bare (rep 1996), in the vicinity of Latitude 32°18'56.5"N, Longitude 80°46'20.0"W, originates with Chart Letter 290 of 1996 (CL290/96). It is recommended that the charted note be deleted and the area charted as shown on the present survey. (Sheet 5 of 6)

c. A charted private daybeacon, PA, in Latitude 32°18'24"N, Longitude 80°38'42"W, originates with an unknown source. This feature was investigated by the field unit but not addressed in the Descriptive Report. The field unit located piles in Latitude 32°18'25.28"N, Longitude 80°38'44.18"W. It is recommended that the daybeacon be deleted from the chart, and piles be charted as shown on the present survey, unless other information indicates otherwise. (Sheet 3 of 6)

d. The charted Sign, PA, in Latitude 32°25'36"N, Longitude 80°40'31"W, originates with an unknown source. This feature was not investigated by the hydrographer and should be retained as charted. (Sheet 1 of 6)

e. The charted Pile PA, in Latitude 32°25'36.5"N, Longitude 80°40'24.9"W, originates with an unknown source. This feature was investigated by the field unit but not

addressed in the Descriptive Report. The field unit located a pile in Latitude 32°25'35.90"N, Longitude 80°40'25.31"W. It is recommended that the Pile PA be deleted from the chart, and a pile be charted as shown on the present survey. (Sheet 1 of 6)

f. The charted Sign PA, in Latitude 32°25'45.19"N, Longitude 80°40'53.59"W, originates with an unknown source and should be deleted from the chart. The field unit located a pile in Latitude 32°25'44.86"N, Longitude 80°40'53.40"W. It is recommended that the charted sign be deleted and the area charted as shown on the present survey.

g. The charted Sign PA, in Latitude 32°26'06"N, Longitude 80°39'44.1"W originates with an unknown source and should be deleted from the chart. The field unit located a pile in Latitude 32°26'06.64"N, Longitude 80°39'44.36"W. It is recommended that the charted sign be deleted from the chart and a pile be charted as shown on the present survey.

h. The following charted features originate with unknown sources and were neither investigated nor addressed by the hydrographer:

<u>Feature</u>	<u>Latitude (N)</u>	<u>Longitude (W)</u>
Sign PA	32°26'06.0"	80°39'31.5"
Sign PA	32°25'59.2"	80°39'32.6"
Sign PA	32°25'59.2"	80°39'44.5"

It is recommended that these features be revised to "Subm pile PA."

i. The charted Subm pile PA, in Latitude 32°25'13.1"N, Longitude 80°40'58.5"W, originates with an unknown source. The field unit located a pile in Latitude 32°25'12.71"N, Longitude 80°40'59.04"W. It is recommended that the Subm pile, PA be deleted from the chart and a pile be charted as shown on the present survey.

j. The following charted features originate with unknown sources and were not investigated by the hydrographer:

<u>Feature</u>	<u>Latitude (N)</u>	<u>Longitude (W)</u>
Subm pile PA	32°25'03"	80°40'59"
Subm dol PA	32°25'02"	80°41'09"
Subm dol PA	32°25'08"	80°41'11"

It is recommended that these features be retained as charted.

(All this page Sheet 1 of 6)

k. A charted sign, in Latitude 32°25'23.7"N, Longitude 80°40'52.1"W, originates with an unknown source. This feature was investigated by the field unit but not addressed in the Descriptive Report. The field unit located a sign on three piles, in Latitude 32°25'26.03"N, Longitude 80°40'51.08"W. It is recommended that the charted sign be deleted and a sign be charted as shown on the present survey. (Sheet 1 of 6)

l. Charted piles, in Latitude 32°14'17.6"N, Longitude 80°40'26.1"W, originates with an unknown source. This feature was investigated by the field unit but not addressed in the Descriptive Report. The field unit located piles in Latitude 32°14'17.34"N, Longitude 80°40'26.45"W. It is recommended that the charted piles be revised and be charted as shown on the present survey. (Sheet 4 of 6)

m. A charted Sign in Latitude 32°15'09.8"N, Longitude 80°45'12.8"W, originates with ^{H10656/95}an unknown source. This feature was neither investigated nor addressed by the hydrographer. It is recommended that this feature be revised to a "Subm ^{Do not concur.} pile." *AWOIS item 9501 located by H10656/95, retain charted data.* (Sheet 6 of 6)

n. The following features were located by the present survey but are not currently charted. These features were not addressed in the Descriptive Report by the hydrographer:

<u>Feature</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Sheet</u>
sign	32°14'27.90"N	80°44'56.85"W	6/6
pier ruins	32°21'12.06"N	80°40'21.36"W	2/6
obstr	32°21'06.17"N	80°40'12.40"W	2/6
obstr	32°20'54.86"N	80°40'04.63"W	2/6

It is recommended that these features be charted as shown on the present survey.

The present survey is adequate to supersede the charted hydrography in the common area, except as noted in this report.

2. Controlling Depths

There are no conflicts between the present survey depths and the controlling depths of Cat Island Reach. Attention is directed to the following: (Sheet 2 of 6)

Conflicts exists with the charted controlling depths in the vicinity of the maintained channel of Cowen Reach. The present survey shows a depth of 22.3 feet in Latitude 32°20'16.28"N, Longitude 80°39'31.24"W, with a controlling

depth of 22.5 feet. Also, the present survey shows a depth of 22.3 feet in Latitude 32°20'09.79"N, Longitude 80°39'30.10"W, with a controlling depth of 24.5 feet. It is recommended that the charted controlling depths be revised to reflect present survey depths.

P. ADEQUACY OF SURVEY

This is an adequate hydrographic survey and should supersede all prior surveys within the common area with the exception of those items noted above.

S. MISCELLANEOUS

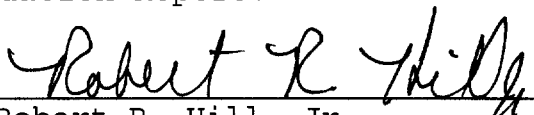
Chart compilation using the present survey data was done by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. NOS chart 11516 (28th Edition, April 12, 1997) was used for compilation of the present survey. Compiled data will be forwarded to Hydrographic Survey Division, Silver Springs, Maryland upon completion of the project.

Marilyn Schlüter
Marilyn L. Schlüter
Cartographic Technician
Verification of Field Data
Evaluation and Analysis

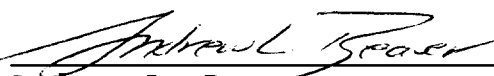
APPROVAL SHEET
F00431

Initial Approvals:

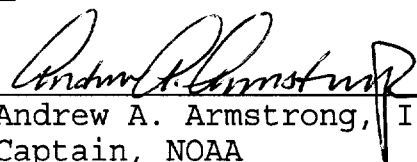
The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproof of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

 Date: 7-29-98
Robert R. Hill, Jr.
Cartographer
Atlantic Hydrographic Branch

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

 Date: 7/30/98
Andrew L. Beaver
Lieutenant Commander, NOAA
Chief, Atlantic Hydrographic Branch

Final Approval:

Approved:  Date: Aug 20, 1998
Andrew A. Armstrong, III
Captain, NOAA
Chief, Hydrographic Surveys Division

80° 41' 00"

80° 40' 30"

80° 40' 00"

80° 39' 30"

BEAUFORT

00° 41' 00" W
HAD 27 32° 26' 00" N
CHECKED BY: MLS
1/4/98

Beaufort River Light 235

32° 26' 00"

Beaufort River Light 240

BEAUFORT RIVER

foul w/ ruins

foul w/ ruins (5)

piles w/ sign
("Bridge Regulations")pile w/ sign
("Slow-No Wake")pile w/ sign
("Slow-No Wake")

FO0431
SOUTH CAROLINA
PORT ROYAL SOUND
HILTON HEAD TO BEAUFORT
JAN. 8, 1997 - FEB. 25, 1997
SCALE: 1:10,000
SOUNDINGS IN FEET AT MLLW
SHEET 1 OF 6

Beaufort River
Light 241

pier

▲ "241A"

(11)

80° 41' 00"

80° 40' 30"

80° 40' 00"

80° 39' 30"

WHITEHALL POINT

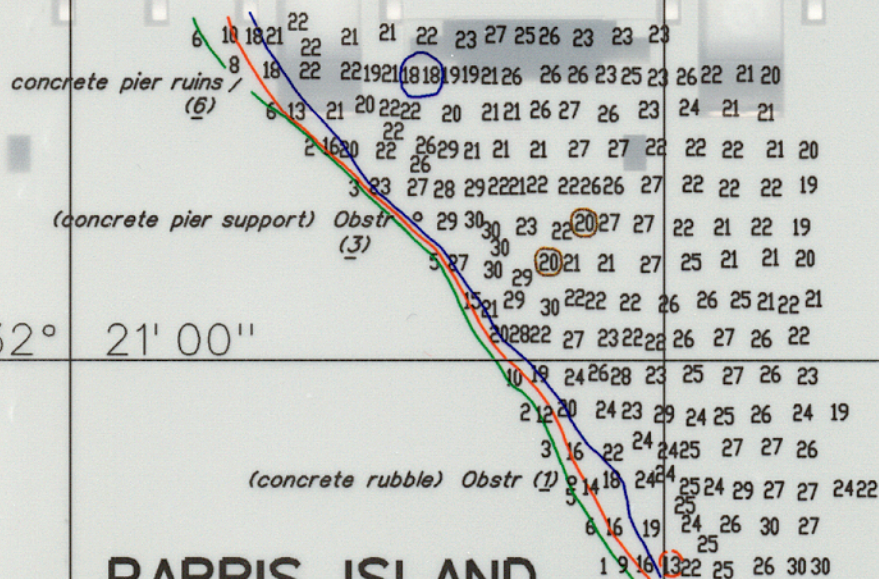
FACTORY CREEK

32° 25' 00"

80° 40' 30"

80° 40' 00"

80° 39' 30"

**PARRIS ISLAND**

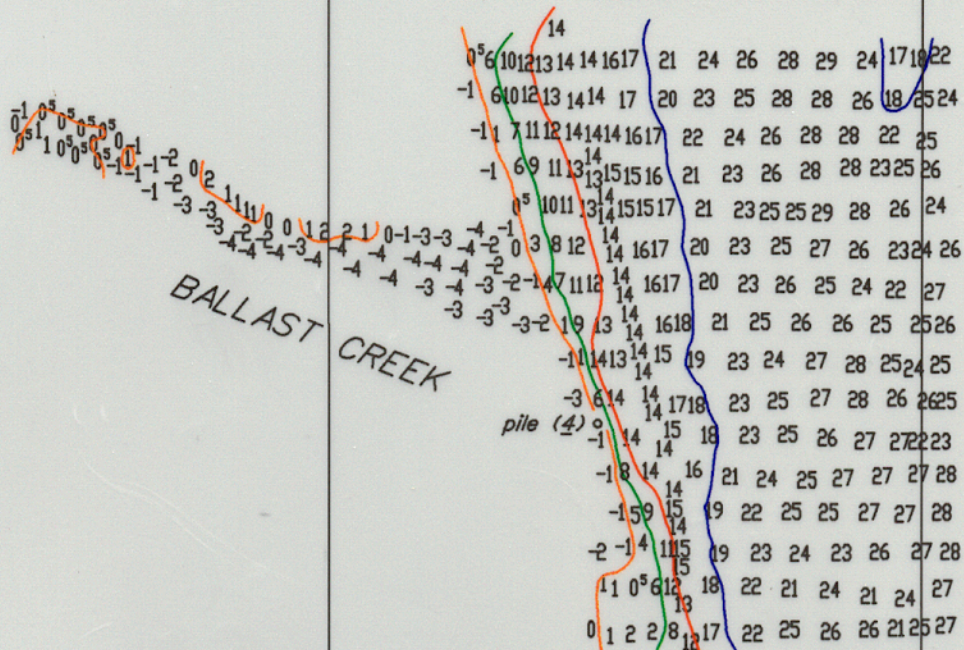
F00431
SOUTH CAROLINA
PORT ROYAL SOUND
HILTON HEAD TO BEAUFORT
JAN. 8, 1997 - FEB. 25, 1997
SCALE: 1:10,000
SOUNDINGS IN FEET AT MLLW
SHEET 2 OF 6

BEAUFORT RIVER

80° 39' 30" W
NAD 27 32° 21' 00" N
CHECKED BY: MLS
3/4/98

32° 20' 30"

32° 20' 30"



32° 20' 00"

80° 40' 00"

80° 39' 30"

80° 39' 00"

80° 38' 30"

80° 38' 00"

32° 18' 30"

32° 18' 30"

◦ piles (cluster of three)

FORT FREMONT

◦ piles (center of two) (7)

32° 18' 00"

32° 18' 00"

BEAUFORT RIVER

80° 38' 30"W
NAD 27 — 32° 18' 00"N
CHECKED BY: MLS
3/4/98

F00431
SOUTH CAROLINA
PORT ROYAL SOUND
HILTON HEAD TO BEAUFORT
JAN. 8, 1997 - FEB. 25, 1997
SCALE: 1:10,000
SOUNDINGS IN FEET AT MLLW
SHEET 3 OF 6
AWOIS NO. 9536, 9537

32° 17' 30"

32° 17' 30"

◦ pile (3)

◦ pile (3)

80° 39' 00"

80° 38' 30"

80° 38' 00"

See next page for blowup
of this area from original
document

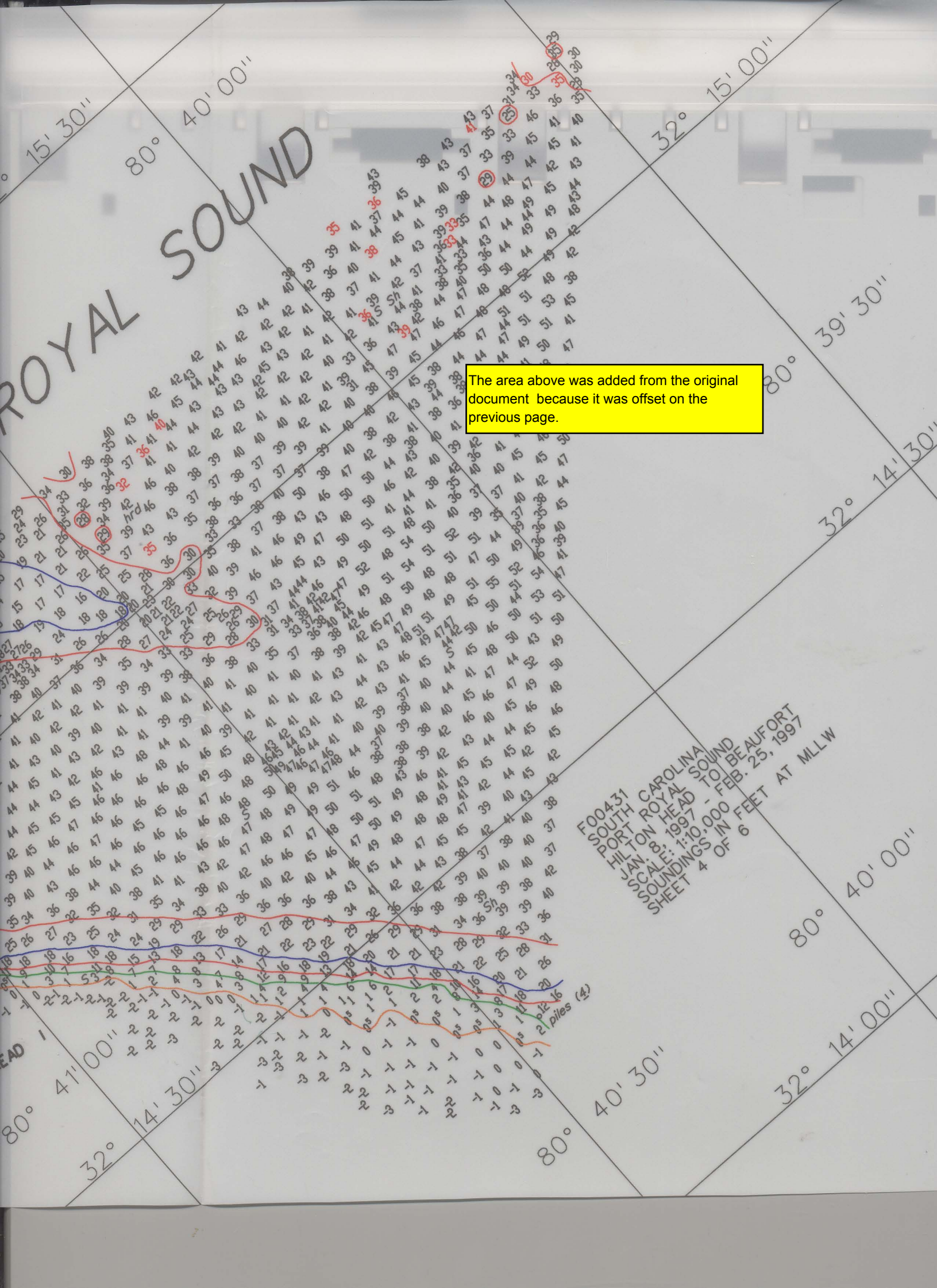
PORT ROYAL SOUND

NAD 27
80° 41' 00" W
32° 15' 30" N
CHECKED BY: MLS
3/4/98

ADJOINS H10656 (1995)

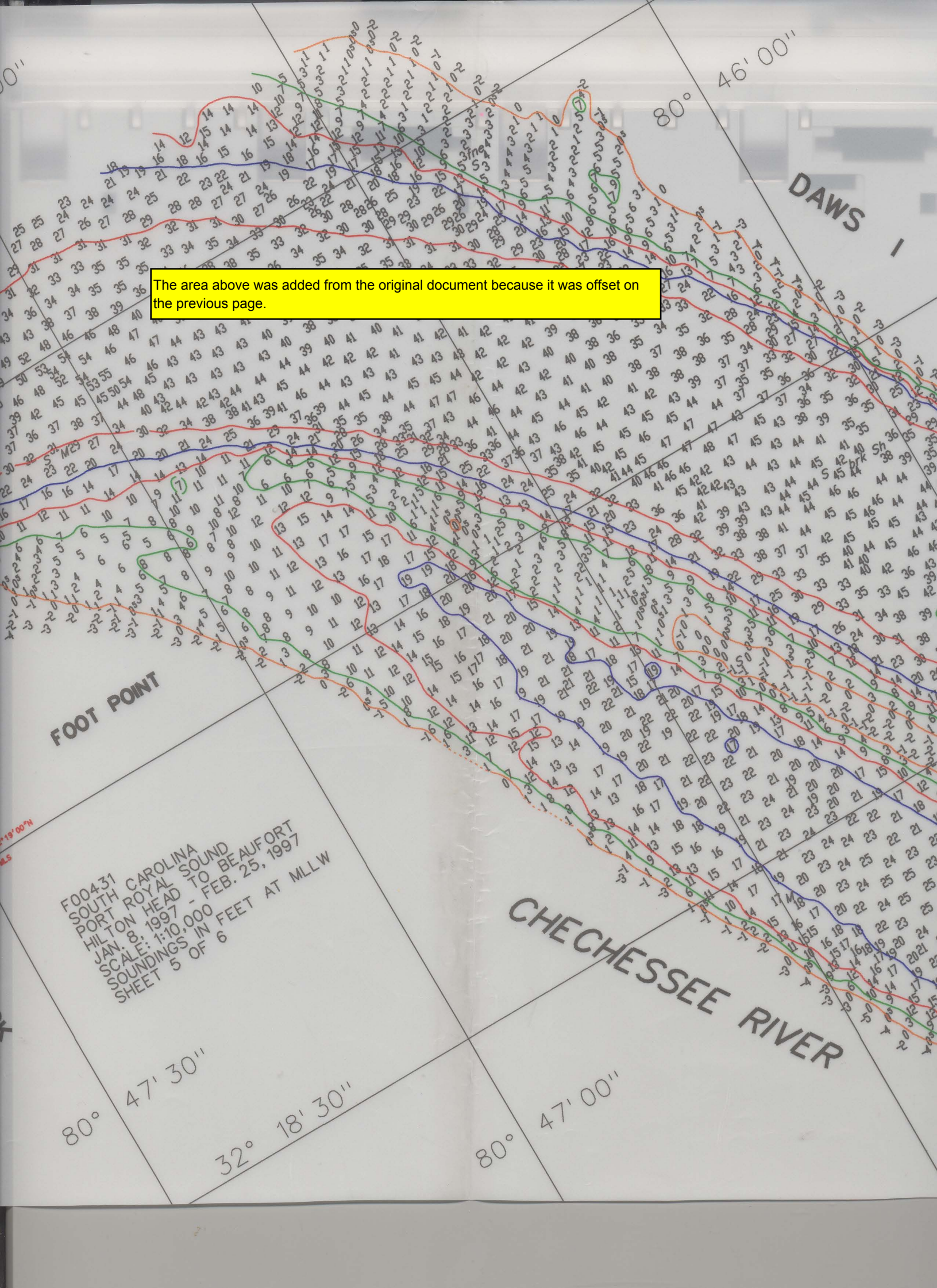
HILTON HEAD

F00431
SOUTH CAROLINA
PORT ROYAL SOUND
HILTON HEAD TO BEAUFORT
JAN. 8, 1997 - FEB. 25, 1997
SCALE: 1:10,000
SOUNDINGS IN FEET AT MLLW
SHEET 4 OF 6



The area above was added from the original document because it was offset on the previous page.

F00431
SOUTH CAROLINA
SOUND
HILTON HEAD TO BEAUFORT
JAC: 8110.000 FEB. 25, 1997
SOUNDINGS IN FEET AT MLLW
SHEET 4 OF 6



The area above was added from the original document because it was offset on the previous page.

FOOT POINT

CHECHESSEE RIVER

DAWS

F00431
SOUTH ROYAL SOUND
PORT HEAD TO BEAUFORT
JAN. 8, 1997 - FEB. 25, 1997
SCALE: 1:10,000
SOUNDINGS IN FEET AT MLLW
SHEET 5 OF 6

32° 15' 30"

ADJOINS H10656 (1995)

PINCKNEY

pile w/sign
("National Wildlife Refuge")

SKULL CREEK

32° 15' 00"

F00431
SOUTH CAROLINA
PORT ROYAL SOUND
HILTON HEAD TO BEAUFORT
JAN. 8, 1997 - FEB. 25, 1997
SCALE: 1:10,000
SOUNDINGS IN FEET AT MLLW
SHEET 6 OF 6

80° 45' 00" W

NAD 27 32° 14' 30" N

32° 14' 30"

CHECKED BY: MLS
3/5/98

° piles w/sign
(11) ("No Wake Zone")

(8)
° pile w/sign
("National Wildlife Refuge")

(9)
° pile w/sign
("National Wildlife Refuge")

80° 45' 30"

80° 45' 00"

80° 44' 30"

MARINE CHART BRANCH
RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. F00431

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]