

FE00414

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC
Field No. WH-10-2-95
Registry No. FE-414

LOCALITY

State GEORGIA
General Locality ATLANTIC OCEAN
Sublocality 4 NM SE OF
WASSAW SOUND
19 95
CHIEF OF PARTY
CDR, J. D. WILDER, NOAA

LIBRARY & ARCHIVES

DATE NOV 2 1995

Diagram
1241-3

4140037

A/G
PRODUCTS
CPA
11512
11511
11509
11480
11009 NC

NOAA FORM 77-28 (11-72)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTER NOS.
HYDROGRAPHIC TITLE SHEET		FE-414

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in completely as possible, when the sheet is forwarded to the Office.	FIELD NO.
	WH-10-2-95

State GEORGIA

General locality ATLANTIC OCEAN

Locality 4 NM SE OF WASSAW SOUND

Scale 1:10,000 Date of Survey APRIL 19-22, 1995

Instructions dated AUGUST 25, 1994 Project No. OPR-G115-WH

Vessel 2931, 2932

Chief of Party CDR John D. Wilder, NOAA
J.D. Wilder, M.R. Kenny, W.G. Kitt, A.L. Beaver, C.E. Parrish, J.T. Michalski,
 K.M. Bowditch, J.D. Garte, M.M. Cisternelli, F.R. Cruz, J.C. Gaskin

Surveyed by DSF-6000N

Soundings taken by echo sounder WHITING SURVEY PERSONNEL

Graphic record scaled by WHITING SURVEY PERSONNEL

Graphic record checked by WHITING SURVEY PERSONNEL

Protracted by N/A Automated plot by ENCAD WVAJET III (AMB)
ZETA 936 PLOTTER (FIELD)

Verification by ATLANTIC HYDROGRAPHIC BRANCH PERSONNEL

Soundings in MLLW ~~METERS~~ FEET

REMARKS: Field Examination of the southern approach to the entrance channel to Wassaw Sound.

Time Zone used, GMT(+0)

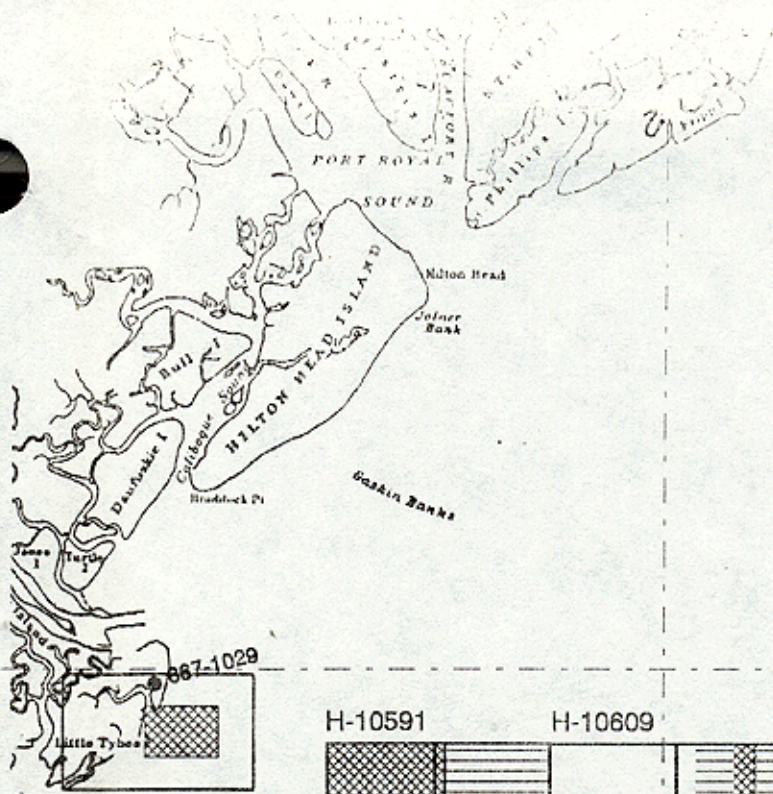
NOTED IN THE DESCRIPTIVE REPORT WERE MADE IN RED DURING OFFICE PROCESSING.

NOV 2 1995 AWOIS and SURF ✓ 11/4/95

PROGRESS SKETCH
HYDROGRAPHIC SURVEY

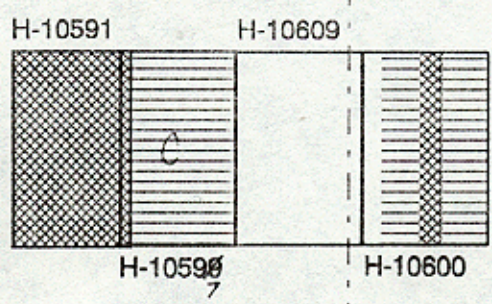
OPR-G115-WH
WASSAW SOUND and WILMINGTON RIVER
OPR-G398-WH
APPROACHES TO SAVANNAH RIVER

APRIL - NOVEMBER 1995



32-00-00

H-10582
FE-414 (1995)



080-55-00

080-30-00

080-00-00

NOAA SHIP WHITING S329
CDR JOHN D. WILDER, COMMANDING

APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV
24							
156							
173							
904							
7							
38							
6							
7							
45							
20							

DAYS AT SEA
LNM SOUNDINGS (SHIP)
LNM SOUNDINGS (LAUNCHES)
LNM SIDE SCAN (SHIP)
LNM SIDE SCAN (LAUNCHES)
SQ NM SURVEYED
ITEMS INV/DIVES
VELOCITY CASTS
BOTTOM SAMPLES
WATER CLARITY OBS
HYDROGRAPHY

**DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY
OPR-G115-WH
WH-10-2-95
FE-414**

**NOAA SHIP WHITING
CDR John D. Wilder, NOAA
Commanding Officer**

A. PROJECT

Project OPR-G115-WH is a basic hydrographic survey covering the approach to Wassaw Sound, Wassaw Island, Wassaw Sound, and the Wilmington and Skidaway Rivers in the State of Georgia. The purpose of project OPR-G115-WH is to provide contemporary hydrographic survey data for existing nautical charts and a special commemorative chart covering the area of the 1996 Summer Olympic Games yachting events. This FE survey was conducted at the request of the Commanding Officer, NOAA Ship WHITING to investigate possible shoaling near the southern end of the Wassaw Sound entrance channel.

Survey operations were conducted in accordance with Hydrographic Project Instructions OPR-G115-WH dated August 25, 1994. Changes to the original instructions include Change Number 1 dated December 9, 1994 and Change Number 2 dated December 12, 1994.

The survey described in this report addresses the "FE" sheet, Atlantic Ocean, 4nm SE of Wassaw Sound, Georgia. The survey was assigned field sheet number WH-10-2-95 and registry number FE-414.

B. AREA SURVEYED

Hydrographic survey FE-414 is located at the southern end of the entrance to Wassaw Sound. Sheet limits are bounded by the following coordinates:

Northern Limit: $31^{\circ} 52' 00''$ North

Western Limit: $080^{\circ} 54' 00''$ West Eastern Limit: $080^{\circ} 52' 30''$ West

Southern Limit: $31^{\circ} 51' 48''$ North

Survey operations commenced on April 19, 1995 (DN 109), and were completed on April 22, 1995 (DN 112).

C. SURVEY VESSELS

Launches 1014 and 1015 (VESNO 2932 and 2931 respectively) were used for mainscheme sounding data acquisition, crosslines, detached positions, and velocity casts. No unusual vessel configurations were used nor were any problems encountered.

D. AUTOMATED DATA ACQUISITION AND PROCESSING- *SEE ALSO EVALUATION REPORT.*

Survey data acquisition and processing were accomplished using the HDAPS system with the following software:

<u>PROGRAM NAME</u>	<u>VERSION</u>	<u>DATE INSTALLED</u>
BACKUP	2.00	February 27, 1995
BASELINE	1.14	February 27, 1995
BIGABST	2.07	February 27, 1995
BIGAUTOST	3.01	February 27, 1995
BLKEDIT	2.02	February 27, 1995
CARTO	2.17	February 27, 1995
CLASSIFY	2.12	April 17, 1995
CONTACT	2.48	April 17, 1995
CONVERT	3.65	February 27, 1995
DAS_SURV	6.80	April 17, 1995
DIAGNOSE	3.05	February 27, 1995
DISC_UTIL	1.00	February 27, 1995
DP	2.18	February 27, 1995
DPCONVERT	1.03	March 7, 1995
DSNEDITS	1.04	March 7, 1995
EXCESS	4.32	February 27, 1995
FILESYS	3.31	March 7, 1995
GRAFEDIT	1.06	February 27, 1995
HIPSTICK	1.01	February 27, 1995
HPRAZ	1.26	February 27, 1995
INVERSE	2.02	February 27, 1995
LISTDATA	1.02	February 27, 1995
LOADNEW	2.13	March 7, 1995
LSTAWOIS	3.07	March 7, 1995
MAINMENU	1.20	February 27, 1995
MAN_DATA	3.02	March 7, 1995

NEWPOST	6.13	February 27, 1995
PLOTALL	2.32	February 27, 1995
POINT	2.12	March 7, 1995
PREDICT	2.01	February 27, 1995
PRESURV	7.11	February 27, 1995
PRINTOUT	4.04	February 27, 1995
QUICK	2.07	February 27, 1995
RAMSAVER	1.02	February 27, 1995
REAPPLY	2.12	February 27, 1995
RECOMP	1.04	March 7, 1995
SCANNER	1.00	February 27, 1995
SELPRINT	2.05	February 27, 1995
SYMBOLS	2.00	February 27, 1995
VERSIONS	1.00	February 27, 1995
ZOOMEDIT	2.33	February 27, 1995

Sound velocity corrections were determined using *CAT* version 2.00 and *VELOCITY* version 2.11. The DGPS station was checked using *MONITOR* version 1.2. There were no nonstandard automated acquisition or processing methods used.

E. SIDE SCAN SONAR EQUIPMENT

No side scan sonar operations were conducted for this survey.

F. SOUNDING EQUIPMENT

A Raytheon Digital Survey Fathometer (DSF-6000N) echo sounder was used to measure water depths during the survey. The DSF-6000N produced a graphic record of the high frequency (100 kHz) and low frequency (24 kHz) depths as well as digitized high and low frequency soundings which were recorded by the HDAPS acquisition system. High frequency depths were selected as the primary soundings and shown on the all sounding plots. In addition, echograms were carefully reviewed for significant features along the track line. Any features on the graphic record that were not selected as primary soundings were then manually selected and inserted into the data set.

The following fathometers were used during this survey:

<u>Vessel</u>	<u>S/N</u>	<u>Dates Used (DN)</u>
2931	B050N	112
2932	A105N	109-110

G. CORRECTIONS TO SOUNDINGS

Sound velocity profiles of the water column were determined using a Seacat Conductivity, Temperature and Depth (CTD) profiler (model SBE-19, S/N 286). The profiler was calibrated on February 15, 1995, during WHITING's winter inport period.

After the CTD cast, programs *CAT 2.00* and *VELOCITY 2.11* were used to process the data, select significant data points, and create a corrector table. The velocity correctors were manually entered into an HDAPS velocity table from where the correctors were applied to both high (100 kHz) and low (24 kHz) frequency beams either during or following acquisition. Velocity profile data are included in the Separates submitted with this survey. ✖

Data Quality Assurance (DQA) for the Seacat CTD profiler was performed by using a hydrometer and a thermometer to measure the density and temperature of a surface water sample taken during the CTD cast. The *CAT* program then compared these values to the CTD surface values and determined if the velocity probe was working properly.

One velocity cast was taken to generate corrector tables for survey FE-414. The cast is summarized in the following table:

<u>DN</u>	<u>Vel.Table#</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Depth</u>
109	6	31° 51' 01"N	080° 53' 13"W	15.2 m

Bar checks were performed on launches 1014 and 1015 to detect the need for corrections to digitized soundings from the DSF-6000N. No corrections were needed.

Leadline comparisons were not made during this survey. -

The correction for the static draft for launches 1014 and 1015 is 0.55 meters, as measured on July 28, 1993.

Settlement and squat measurements for launch 1014 (Offset Table 2) and launch 1015 (Offset Table 1) were conducted and correctors determined on March 29, 1995. The settlement and squat correctors were applied to the sounding data in real time on each survey platform. Settlement and squat corrector tables are in Separate IV. ✖

Heave correctors were applied during post processing for launches 1014 and 1015 by manually scanning the echograms.

The tidal datum for this project is Mean Lower Low Water. The operating tide station at Fort Pulaski, Georgia (867-0870) served as the reference station for predicted tides. No tidal zoning was done for this survey. Predicted tides were applied to data using no time correction, and a 0.99 tidal height ratio. Tidal data used during data acquisition were taken

from Table 2 of the East Coast of North and South America Tide Tables and were applied to the digital data during acquisition by HDAPS. Digital tidal data were received on floppy disk from N/CG24, Hydrographic Surveys Branch. APPROVED TIDES AND ZONING WERE APPLIED DURING OFFICE PROCESSING.

WHITING installed a tide station at Tybee Marina (867-1029) for datum control of FE-414. Opening levels were run on March 30, 1995.

H. CONTROL STATIONS - SEE ALSO EVALUATION REPORT.

The horizontal datum for this project is the North American Datum of 1983 (NAD-83). The source of differential correctors was a HF Differential GPS station located on a tower over the "SKID" control mark on Skidaway Island, Georgia. Additionally, WHITING used the forward range marker on Jones Island Range for performance checks. The adjusted NAD-83 positions for SKID (1st Order Class I) and Jones Island Forward Range (4th Order) were provided by the Field Photogrammetry Section on March 6, 1995 and August 16, 1994 respectively. The positions are as follows:

	<u>Latitude</u>	<u>Longitude</u>
SKID	31° 59' 19.22599" N	081° 01' 12.26294" W
Jones Island Range, Front	32° 02' 31.71243" N	080° 51' 10.09256" W

WHITING used *MONITOR* version 1.2 to verify the station position, and to check for multipath in the area. The *OUTLIER.SUM* file and associated scatter-plot are in Separate III.*
 * DATA FILED WITH FIELD RECORDS.

I. HYDROGRAPHIC POSITION CONTROL

A Differential Global Positioning System (DGPS) was used as the navigation system for this survey. Both launches used an Ashtech Sensor GPS receiver with a LRD-1 HF receiver supplying correctors for DGPS navigation. Ashtech receivers were initialized by HDAPS; LRD-1 receivers were set to the appropriate frequency.

DGPS positioning was accomplished in accordance with the FPM, section 3.4. Horizontal Dilution of Precision (HDOP) limits were computed as required in section 3.4.2 of the FPM. The HDOP limit for a 1:10,000 scale survey using the SKID station is 3.75. No position flyers were encountered. All suspect positions (high HDOP, DR'ed positions, high EPE) were examined for reliability. Questionable positions were either smoothed or rejected. The serial numbers of the Ashtech Sensor and LRD-1 receivers used are as follows:

	<u>Device</u>	<u>Serial Number</u>
Launch 1014	Ashtech Sensor	700417B1203
	LRD-1	204
Launch 1015	Ashtech Sensor	700417B1191
	LRD-1	233

DGPS performance checks were done in two stages. The first stage was to send a survey launch to the Jones Island Front Range marker where the launch would take ten detached positions and compare them to the known position. Stage two was conducted with each launch securely housed in WHITING's davits. Simultaneous HDAPS positions were compared between WHITING and each launch and a offset in distance and azimuth was applied between the ship and each launch system. All DGPS performance checks confirmed that the DGPS beacon was operating properly.

DGPS antenna offsets and laybacks were measured on July 28, 1993, for launches 1014 and 1015. Offsets and laybacks were measured using the 100 kHz (high frequency) echosounder transducer as the reference. Antenna heights were also measured on the same respective dates shown above, using the water line as the reference. The offsets, laybacks and heights were applied by HDAPS on-line by way of the launches individual offset tables mentioned in section G. A minimum of four satellites were used during survey FE-414 (1:10,000), providing altitude unconstrained positioning. All offset data are on file at N/CG244. DATA FILED WITH FIELD RECORDS.

J. SHORELINE

Shoreline data was not required for this sheet.

K. CROSSLINES

A total of 5.41 nautical miles of crosslines were run for FE-414. This amounts to 14% of the mainscheme miles run. Using predicted tides, there was adequate agreement between crossline and mainscheme lines. Most of the soundings were within 0.3 meters or better with the largest difference being 0.6m.

L. JUNCTIONS - SEE ALSO EVALUATION REPORT.

Junction comparisons with H-10576B (OPR-G115-WH-94, Sheet "C") indicated a significant difference in the shoaling at the north end of FE-414. Soundings differed by as much as one meter in some areas while others showed almost no change over the approximate 6 month period between the surveys. *This verifies the highly dynamic nature of this area due to frequent influences of weather and current. *DO NOT CONCUR - ONLY 0.3m (1FT) OF DIFFERENCE DETERMINED AFTER SMOOTH TIDES APPLIED.

M. COMPARISONS WITH PRIOR SURVEYS - SEE ALSO EVALUATION REPORT.

Prior survey H-9460 (WH-20-1-74, 1:20,000) contains soundings that fall within the survey limits of FE-414. Note that this survey is referenced to the NAD-27 horizontal control datum. All comparisons were done in feet with an overlay of FE-414 plotted at the 1:20,000 scale.

Prior survey H-9460 covers the entire area surveyed by FE-414. Soundings on the southeast portion of FE-414 agree very well with the prior survey with most soundings falling within 2 feet of H-9460. Shoals in the northwest portion of H-9460 seem to have disappeared and the bottom has become much more uneven, possibly due to the effect of storms and currents which are constantly affecting the area. *CONCUR*

The most significant shoaling seems to have taken place in the northern portion of the survey area near the channel entrance to Wassaw Sound. FE-414 soundings indicate shoaling of 2 meters in some areas with 1 meter shoaling common in the northeast corner. Sediment transition from Wassaw Sound down through the entrance channel and influences from storms and currents on the sand bottom are the most probable explanations for this migration of the shoals from the northwest to the southeast. The fact that the local Coast Guard moves the entrance channel buoys on a regular basis is a good indicator that this area is highly dynamic and susceptible to rapid changes in depth. *CONCUR*

N. ITEM INVESTIGATIONS

No item investigations were conducted on this sheet.

O. COMPARISON WITH THE CHART - SEE ALSO THE EVALUATION REPORT.

Soundings from chart 11512 (52nd ed., January 8/94, 1:40,000) and chart 11511 (14th ed., July 3/93, 1:40,000) were compared to FE-414 soundings. Due to the small area of the survey, comparisons with charted soundings were limited.

In general, soundings in the south central area of the survey area have deepened slightly while soundings in the northwest corner have deepened by up to 2.5 meters. Another area showing significant change is the northeast corner of the survey where soundings indicated shoaling of up to 1.0 meter. The most significant shoaling occurs in the north central area of the sheet where only 150 meters from a 4.9 meter charted depth is a sounding of 2.8 meters. All other charted soundings agree to within 0.3 meters of nearby soundings.

P. ADEQUACY OF SURVEY - SEE ALSO THE EVALUATION REPORT.

This survey is complete and of adequate quality to supersede all prior surveys of the area.

Q. AIDS TO NAVIGATION

One buoy was examined by Launch 1015. Characteristics to all floating aids to navigation within the survey limits were verified as depicted. The item examined was as follows:

<u>Name</u>	<u>Latitude</u>	<u>Longitude</u>
R "2W"	31° 51' 29.032"N	080° 52' 57.079"W

There were no bridges, overhead cables, pipelines, or submarine cables, ferry routes or ferry terminals in the survey area. *THIS AID APPEARS ADEQUATE TO SURVEY ITS INTENDED PURPOSE.*

R. STATISTICS

Number of Positions	376
Main-scheme Sounding Lines (Nautical Miles)	37.96
Crosslines (Nautical Miles)	5.41
Square Nautical Miles Surveyed	1.02
Days of Production	3
Detached Positions	1
Bottom Samples.....	None
Tide Stations Installed	None
Current Stations.....	None
Number of CTD Casts	1
Magnetic Stations.....	None

S. MISCELLANEOUS - SEE ALSO THE EVALUATION REPORT.

No current studies were done in the area. No unusual magnetic variations were encountered in the survey area nor any unusual submarine features discovered.

T. RECOMMENDATIONS - SEE ALSO SECTION P. OF THE EVALUATION REPORT.

A note should be added to the large scale charts of the area (chart 11512, 52nd ed., January 8/94, 1:40,000 and chart 11509, 24th ed., August 27/94, 1:80,000) to warn users of the possibility of shifting shoals. FE-414 is complete and without inadequacies. No additional fieldwork is required.

U. REFERRAL TO OTHER REPORTS

None.

Submitted By:

Andrew L. Beaver US/NOAA

LT Andrew L. Beaver, NOAA
Navigation Officer, NOAA Ship WHITING

HORIZONTAL CONTROL STATIONS

WHITING personnel erected a HF Differential GPS receiver/transmitter on the grounds of Skidaway Institute of Oceanography (station SKID). The position of the Skidaway mark was faxed from Field Photogrammetry Section to the WHITING on March 6, 1995. WHITING launches conducted DGPS performance checks using the Jones Island Range, Front Light as a known position. The positions are as follows:

Station:	SKID
Latitude:	31° 59' 19.22599" N
Longitude:	081° 01' 12.26294" W
Ellipsoid Ht:	-29.858 meters
Station:	Jones Island Range, Front Light
Latitude:	32° 02' 31.71243" N
Longitude:	080° 51' 10.09256" W



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
NOAA Ship WHITING S-329
439 W. York Street
Norfolk, VA 23510-1114

May 30, 1995

Commander, Seventh Coast Guard District
Brickell Plaza Federal Building Room 406
909 SE First Avenue
Miami, Florida 33131-3050

Dear Sir:

The NOAA Ship WHITING, while undergoing hydrographic survey operations near the entrance to Wassaw Sound, Georgia, discovered an uncharted shoal in the vicinity of red buoy "2W". Enclosed is a report concerning the shoal which should be placed in the next Notice to Mariners and included in the next chart update.

Differential GPS was used to determine survey positions. Positions are referenced to NAD 83. All depths are referenced to MLLW using predicted tides. Charts 11512 and 11509 are the largest scale charts affected.

A copy of this letter and attachments have been forwarded to the following offices:

Chief, Nautical Charting Division, NOAA
Chief, AMC Operations Division, NOAA
Chief, Atlantic Hydrographic Section
Director, Defense Mapping Agency
Hydrographic/Topographic Center
President, Savannah Pilots Association

Sincerely,

John D. Wilder
Commander, NOAA
Commanding Officer

Enclosures

cc: AMC1
N/CG2
N/CG244
DMAHTC
Savannah Pilots



REPORT OF UNCHARTED SUBMERGED FEATURE

Hydrographic Survey Registry Number: FE-414

State: Georgia

General Locality: Atlantic Ocean

Sublocality: 4 NM SE of Wassaw Sound

Project Number: OPR-G115-WH

The following feature was found during hydrographic survey operations by NOAA Ship WHITING:

Object Discovered:

	<u>Latitude</u>	<u>Longitude</u>
Shoal Depths	31° 51' 53.018"	080° 53' 14.787"

Shoal depths of 9 feet were discovered within 150 meters of a charted 15 foot depth.

Least depths were measured using a Raytheon Digital Survey Fathometer (DSF) 6000N echo sounder. All soundings have been corrected to MLLW with predicted tide correctors. Differential GPS was used to determine survey positions referenced to NAD 83.

Affected Nautical Charts:

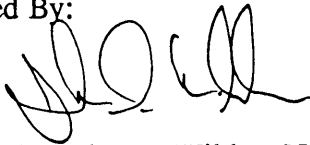
<u>Chart Number</u>	<u>Edition No.</u>	<u>Date</u>	<u>Reported Depth</u>	<u>Chart Datum</u>	<u>General Location</u>	
					<u>Latitude</u>	<u>Longitude</u>
11512	52	1/08/94	as noted	NAD 83	31° 51' 53"	080° 53' 15"
11509	24	8/27/94	as noted	NAD 83	32° 51' 53"	080° 53' 15"

Questions Concerning this report should be directed to the Atlantic Hydrographic Section in Norfolk, Virginia, at telephone number (804) 441-6746.

**APPROVAL SHEET
HYDROGRAPHIC SURVEY
OPR-G115-WH
1995
WH-10-2-95
FE-414**

The data for this survey were acquired and checked under my daily supervision. Position and sounding accuracy meet the requirements specified in the Field Project Instructions, Hydrographic Manual, Hydrographic Survey Guidelines and the Field Procedures Manual for Hydrographic Surveying. This survey is complete and adequate for the intended purpose of delineating bottom topography, determining depths and identifying all potential dangers to navigation. No final field sheets were prepared for this survey. The survey data and accompanying records are complete for the preparation of the smooth sheet.

Approved By:



Commander John D. Wilder, NOAA
Commanding Officer, NOAA Ship WHITING



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: July 28, 1995

HYDROGRAPHIC BRANCH: Atlantic

HYDROGRAPHIC PROJECT: OPR-G115-WH

HYDROGRAPHIC SHEET: FE-414

LOCALITY: 4 Nautical Miles SE of Wassaw Sound, Georgia, Atlantic Ocean

TIME PERIOD: April 19 - 22, 1995

TIDE STATION USED: 867-1029 Tybee Marina, Ga.
Lat. 31° 59.8'N Lon. 80° 51.3'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): -0.08 ft.
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 6.9 ft.

REMARKS: RECOMMENDED ZONING

Apply a -10 minute time correction and a x1.03 range ratio to heights using Tybee Marina, Ga. (867-1029).

Notes: 1. Times are tabulated in Greenwich Mean Time.
2. Data for Tybee Marina, Ga. (867-1029) are temporarily stored in file #667-1029.

Caution: Tybee Marina, Ga. (867-1029) data are considered preliminary until vertical stability is verified with closing levels by the NOAA ship Whiting.

William M. Hayes

CHIEF, DATUMS SECTION



10/31/95

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: FE-414

NUMBER OF CONTROL STATIONS	0
NUMBER OF POSITIONS	0
NUMBER OF SOUNDINGS	0

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	12	05/17/95
VERIFICATION OF FIELD DATA	28	10/20/95
QUALITY CONTROL CHECKS	8	
EVALUATION AND ANALYSIS	3	
FINAL INSPECTION	0	10/25/95
COMPILATION	11	10/31/95
TOTAL TIME	62	
ATLANTIC HYDROGRAPHIC BRANCH APPROVAL		10/27/95

**ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR FE-414 (1995)**

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 (HPS)
AUTOCAD, Release 12
NADCON, version 2.10
dBASE IV, version 2.0

The smooth sheet was plotted using a ENCAD NovaJet III plotter.

H. CONTROL

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, move the projection lines 0.795 seconds (24.47 meters or 2.44 mm at the scale of the survey) north in latitude, and 0.622 seconds (16.35 meters or 1.63 mm at the scale of the survey) east in longitude.

L. JUNCTIONS

H-10576 (1994) 1:10,000 to the north

A standard junction could not be effected between the present survey and survey H-10576 (1994). The junctional survey is archived at National Ocean Service (NOS) headquarters, Silver Spring, Maryland. Any adjustments to the depth curves in the junctional area will have to be made on the chart during compilation.

There are no contemporary junctional surveys to the south, east, or west of the present survey. Charted hydrography is in harmony with the present survey to the south, east and west.

M. COMPARISON WITH PRIOR SURVEYS

H-9144 (1973-74)

H-9460 (1974)

1) Prior survey depths from H-9144 (1973-74) compare favorably with the present survey and show a general trend of being 1 ft (0³m) deeper than present survey depths.

2) Prior survey depths from H-9460 (1974) compare favorably with the present survey and show a general trend of being 1 to 2 ft (0³ to 0⁶ m) deeper than present survey depths. In the vicinity of Latitude 31°51'55"N, Longitude 80°53'17"W the prior survey depth are 3 to 6 ft (0⁹ to 1⁸m) deeper than present survey depths. There are some scattered depths from prior survey in the vicinity of Latitude 31°51'37"N, Longitude 80°53'56"W; Latitude 31°51'53"N, Longitude 80°53'56"W; Latitude 31°52'02"N, Longitude 80°53'57"W, that are 4 to 10 ft (1 to 3m) shoaler than present survey depths.

The differences between the above prior surveys and the present survey may be attributed to natural changes and improved hydrographic surveying methods and equipment.

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

**O. COMPARISON WITH CHARTS 11511 (14th Edition, Jul., 3/93)
11512 (5²nd Edition, Jan., 8/94)**

The charted hydrography originates with the previously discussed prior surveys and needs no further discussion. The hydrographer makes an adequate chart comparison in section O. of the Descriptive Report.

The present survey is adequate to supersede the charted hydrography in the common area.

P. ADEQUACY OF SURVEY


This is an adequate hydrographic survey. No additional work is recommended.

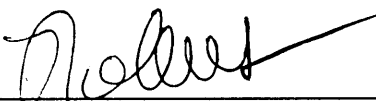
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S. MISCELLANEOUS

Chart compilation using the present survey was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland.

WHITING Processing Team


for Robert Snow
Cartographic Technician


Norris A. Wike
Cartographer

APPROVAL SHEET
FE-414

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 magnetic tape record for this survey. A final sounding printouts of the survey has been made. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Deborah A. Bland Date: OCTOBER 27, 1995
Deborah A. Bland.
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.

Nicholas E. Perugini Date: October 27, 1995
Nicholas E. Perugini
Commander, NOAA
Chief, Atlantic Hydrographic Branch

Final Approval:

Approved: Andrew A. Armstrong, III Date: Nov 3, 1995
Andrew A. Armstrong, III
Captain, NOAA
Chief, Hydrographic Surveys Division

80° 54' 00"

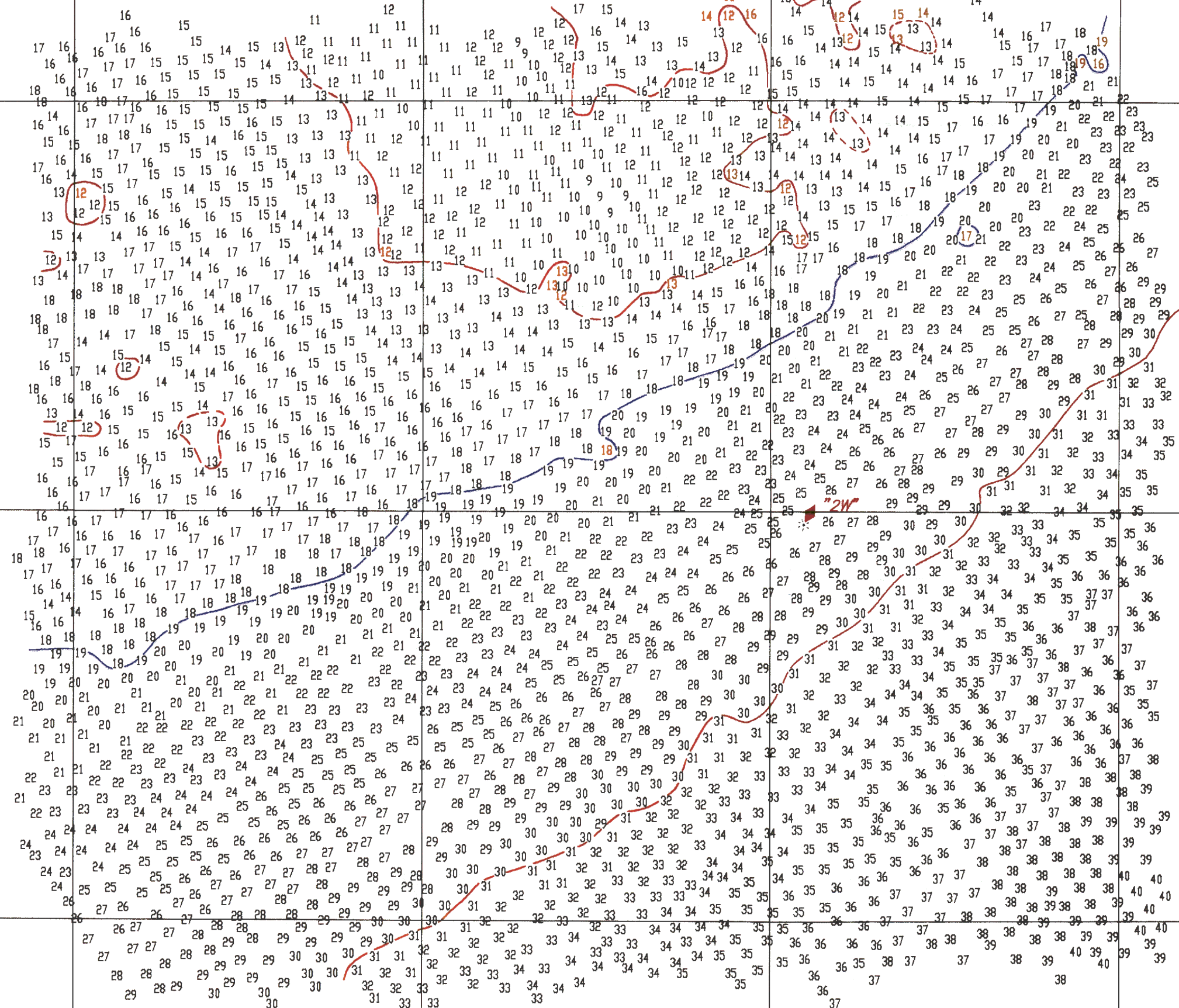
80° 53' 30"

80° 53' 00"

80° 52' 30"

80° 52' 00"

ADJOINS H-10576 (1994)



80/52/00W
NAD 27 31/52/00N

CHECKED BY: RS
8/23/95

31° 51' 30"

FE-414
GEORGIA
ATLANTIC OCEAN
4 NM SE OF WASSAW SOUND
APRIL 19-22, 1995
1:10,000
SOUNDINGS IN FEET AT MLLW
HORIZONTAL DATUM: NAD 83
SHEET 1 OF 1

31° 51' 00"

80° 54' 00"

80° 53' 30"

80° 53' 00"

80° 52' 30"

80° 52' 00"

MARINE CHART BRANCH
RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-414

INSTRUCTIONS

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

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

CHART	DATE	CARTOGRAPHER	REMARKS
11509	10/27/95	<i>Stallut</i>	Full Part Before After Marine Center Approval Signed Via <u>FULL APPLICATION</u> Drawing No. <u>OF SNDGS THRU 11511</u>
11511	10/26/95	<i>Stallut</i>	Full Part Before After Marine Center Approval Signed Via <u>FULL APPLICATION</u> Drawing No. <u>OF SNDGS FROM S.S.</u>
11512	10/26/95	<i>Stallut</i>	Full Part Before After Marine Center Approval Signed Via <u>FULL APPLICATION</u> Drawing No. <u>OF SNDGS FROM S.S.</u>
11512	11/7/95	<i>John Baker</i>	Full Part Before After Marine Center Approval Signed Via Drawing No. <u>50 Fully app'd</u>
11511	11/7/95	<i>John Baker</i>	Full Part Before After Marine Center Approval Signed Via Drawing No. <u>21 Fully app'd</u>
11509	11/7/95	<i>John Baker</i>	Full Part Before After Marine Center Approval Signed Via Drawing No. <u>36 Fully app'd</u>
11480	3/15/96	<i>Travis Nunn</i>	Full Part Before After Marine Center Approval Signed Via Drawing No. <u>41 App'd thru 11509</u> <i>EM</i>
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.