

9799

Diag. Cht. No. 1242-3.

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey Hydrographic
Field No. HSB-10-4-78
Office No. H-9799

LOCALITY

State Georgia-Florida
General Locality
Locality St. Marys Entrance

1978

CHIEF OF PARTY
T. W. Richards

LIBRARY & ARCHIVES

DATE Nov. 8, 1979

AREA 3
Chart
11480
11489-A
11502
11503

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✓ = Misc. items removed from the D.R. and filed with the field records

HYDROGRAPHIC TITLE SHEET

H-9799

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

HSB-10-4-78

State Georgia/Florida

General locality Georgia/Florida Border ATLANTIC OCEAN

Locality St. Marys Entrance

(JD 068) (096)

Scale 1:10,000

Date of survey 9 MAR - 6 APR 1979

Instructions dated 31 JUL 1978

Project No. OPR-G324-HFP-78*

Vessel Launch 1008

Chief of party LCDR Thomas W. Richards

Surveyed by Kathy Andreen, LT, NOAA

Soundings taken by echo sounder, ~~_____~~, ~~_____~~ Ross Fathometer S/N - 1079

Graphic record scaled by K.A., W.S., D.B., J.K., K.K.

Graphic record checked by Same

Protracted by _____ Automated plot by AMC Xynetics 1200
AMC Xynetics 1201

Field plot - PDP8/E

Verification by _____

Soundings in ~~_____~~ feet at MLW ~~_____~~

REMARKS: This survey is complete and adequate to supersede prior surveys for other reference reports, see section(s). Time Meridan: 0° (GMT)

KA - Kathy Andreen *Change No. 1 (9/20/78)

WS - Wayne Sprye Change No. 2 (11/7/78)

DB - Danny Bryant Change No. ³/₂ (2/5/79)

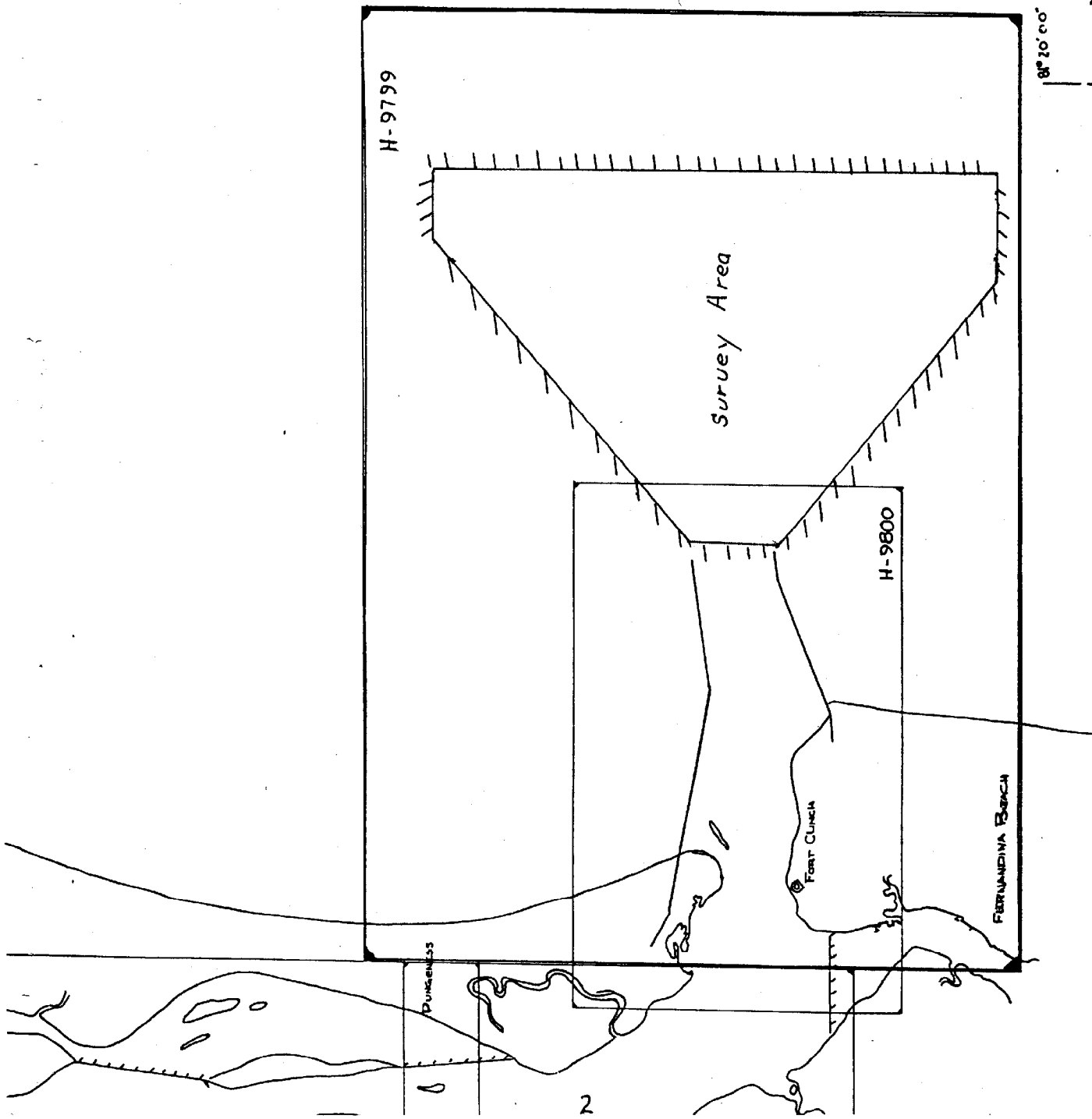
JK - Judy Krauthamer *Applied to stds 5/28/80*

KK - Kurtz Klinefelter

All notes in red are by the verifier.

All times are Coordinated Universal Time (CUT)

CHART 11502



DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-9799 (HSB-10-4-78)

Scale: 1:10,000 (1979)
LCDR Thomas W. Richards

Hydrographic Field Party #2
Chief of Party

A. PROJECT

This hydrographic survey was conducted in accordance with PROJECT INSTRUCTIONS OPR-G324-HFP-79, St. Marys River to Kings Bay, Georgia, dated 31 July, 1978, with the following supplements to instructions: Change No. 1, dated 20 Sept., 1978; Change No. 2, dated 7 Nov., 1978; and Change No. 3, dated 5 Feb., 1979.

B. AREA SURVEYED

The area covered by this survey resembles the shape of a triangle, bound on the west by Longitude $81^{\circ}24.4'W$, extending northeast from the seaward end of the north jetty of St. Marys Entrance to $30^{\circ}45.0'N$, $81^{\circ}21.0'W$. The eastern limit of the survey is Longitude $81^{\circ}21.0'W$, with the southern edge starting at $30^{\circ}40.6'N$, $81^{\circ}21.0'W$ continuing northwest to the seaward end of the south jetty. The survey commenced on 9 March (JD 068), 1979 and ended on 6 April (JD 096), 1979.

C. SOUNDING VESSEL

NOAA Launch 1008, equipped with a Ross fathometer, Model 5000, was used to obtain all soundings and bottom samples for this survey.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The Ross fathometer, Model 5000, S/N 1079, operated well during the survey with no problems. Technicians monitored the fathometer continuously during operations and routinely checked the "Calibrate Phase Set" line to insure that it was properly adjusted at all times. The "Calibrate Phase" was set at 30 feet, which was approximately half-scale for the maximum depth recorded on this survey.

All fathograms were scanned twice after hydrography for peaks and deeps besides comparing the analog trace with the digitized value. When scanning showed that the digitized value was undoubtedly in error, a depth was determined from the analog trace.

The length from the bar to the marked five-foot increments on the chains used for the daily bar checks, were measured with a steel tape and was found to be correct. Bar checks were taken daily. The bar check abstract is included in the separates following the text.

A preliminary velocity table as determined from the first few routine bar checks, plus transducer correction (TRA) was applied to the soundings on the smooth boatsheets. A final velocity table was determined from all bar checks taken. Both tables are clearly marked, and are included in the separates following the text.

Settlement and squat for the vessel were determined as outlined in Section 4.9.4.2 of Hydrographic Manual, 4th Edition. The graph and settlement and squat corrector abstract are included with this report in the separates following the text. Daily TRA corrections were determined as outlined in Section 4.9.4.1 of the Hydrographic Manual, 4th Edition.

E. HYDROGRAPHIC SHEETS

The transverse mercator projection and soundings were plotted using the PDP8/e hydroplot system on Launch 1008, while the logging and editing of tapes was accomplished by using both hydroplot systems on 1008 and Launch 1277. Launch 1008, equipped with the PDP8/e computer, S/N 0309219, and complot plotter, Model DP5-5, S/N 5848-19, was primarily used for gathering raw data and smooth plotting the final field sheet. Launch 1277, used only for processing the data tapes, was equipped with the PDP8/e computer, S/N 308137.

The central meridian for the project was 81°24'00"W and the control latitude was 3393000 meters north of latitude zero. Rough plots were made daily and the final plot constructed continuously as the survey progressed. Velocity corrections, TRA, and predicted tide corrections were applied to the final plot. Predicted tides were computed for the St. Marys Entrance, North jetty, using Savannah River Entrance, Georgia, as the reference station. Program AM500 was used to construct predicted tide tapes.

Along with the one main scheme final field sheet, there is an overlay sheet used for developments, X-lines, bottom samples and detached positions. Both are at a scale of 1:10,000. No discernable distortion could be detected in the mylar boatsheets during the period of smooth field plotting. All data was transferred to the Processing Division, Atlantic Marine Center.

F. CONTROL STATIONS

Control stations Cumberland Sound Range "B" Front Light, 1978; SF 28; Ferna, 1954; H-62-02-GA, 1978; were established or verified by Photo Party 62, Coastal Mapping Division, Atlantic Marine Center. Control stations Amelia Island Lighthouse (EEC), 1978; and St. Marys Entrance Front Range Light, 1979 were established by Photo Party 61, Coastal Mapping Division. Refer to Signal Report, CM-7804, Kings

Bay - to St. Marys Entrance, Georgia, for surveying methods, geodetic abstracts and computations. The referenced report was not received. See Verifier's Report

G. HYDROGRAPHIC POSITION CONTROL

Del Norte positioning equipment, operating in a range-range mode, was used to control the hydrography on this survey. Three different control networks were used on this sheet for the control stations. All shore stations were located at or eccentric to established third-order triangulation, intersection or traverse stations.

Whenever possible, calibration was established twice daily by using theodolite intersection of the launch. Calibrations were computed using program RK562, daily printouts are submitted with the data printouts. Abstract for electronic correctors are included with this report.

Several problems were encountered with the Del Norte equipment used on this survey, especially with any remote located at station Amelia Island Lighthouse, (ECC), 1979, elevation of 107 ft. Originally the 84 remote (S/N 1316), which was located at the lighthouse, would continuously jump 30 meters. This remote was replaced with the 86 unit (S/N 262) which then appeared to produce a null zone over 90% of the survey area. The 86 unit was transferred to station H-62-02-GA-78 (#200) and operated well for only a few hours before going totally off the air. Unit 82 (S/N 216) was placed on station #200, when problems of rates jumping occurred, presumably due to low elevation of the unit. The 82 unit was transferred back to the lighthouse (#203) where it began to go on and off the air 60% of the time. DMU's and master units were switched, however the problems still existed. The remote unit was switched with the 86 unit (S/N 262), same problems occurred until the unit was taken off a tripod and placed on the observation deck, where it worked fairly well. Rates would still frequently jump, thus R1 station was changed to Ferna (station #136), where the remote unit 82 (S/N 249) was placed on a 20 ft. tower. No other problems occurred.

A maximum difference of 5 meters between morning and evening calibrations was observed, with the mean standard deviations of calibrations throughout the survey ranging between 0 and 3.42 meters. Calibration distances varied from 2596 to 8050 meters.

The following is a summary of equipment utilization during the project. Refer to the enclosed signal list for shore stations names and locations.

<u>Signal No.</u>	<u>Del Norte Remotes-S/N</u>	<u>Julian Days Used</u>
-------------------	------------------------------	-------------------------

134	174	068, 072, 078, 079, 080, 096
-----	-----	------------------------------

136	249	079, 080, 096
200	262	068
200	216	072
203	262	068, 072
203	249	078

DMU 189 and Master 199 used on days: 068, 072, 078, 079, 080, 096.

DMU 432 and Master 162 used on day: 072.

H. SHORELINE *See Verifier's Report*

The only shoreline features on the smooth field sheets, are the seaward ends of the St. Marys Entrance jetties. These were transferred from 1:10,000 scale blow-up of NOAA Chart 11503, scale 1:20,000. Shoreline manuscripts were not available for this area, however, it should be noted that there was no shoreline in the survey area.

I. CROSSLINES *See Verifier's Report*

Crosslines totaled 14.3 nautical miles or 10.6% of the main scheme soundings. All crosslines compared to the main scheme agreed to within two feet.

J. JUNCTIONS

As per PROJECT INSTRUCTIONS, junctions were made with the survey H-9428, scale 1:40,000, (1974) and with the prior survey H-8106, scale 1:10,000, (1954-1955). All junction soundings between the present survey and H-9428 agreed to the nearest foot. However, successful junctioning between the present survey and H-8106 could not be accomplished. As suspected, due to the nature of the area surveyed (strong currents and sand bottom), and continuous shifting of the bottom profile, it was impossible to adequately junction with the 1954-1955 survey. Refer to Section K, Comparison With Prior Surveys, for more information. *See also the Verifier's Report*

K. COMPARISON WITH PRIOR SURVEYS *See also section 6 of the Verifier's Report*

Comparisons were made with the prior surveys, U.S.C & GS Surveys H-8106, St. Marys Entrance - Cumberland Sound, (1954-1955), scale 1:10,000 and H-5690, St. Marys Entrance, Florida-Georgia, (1934), scale 1:10,000.

Due to the dynamic area involved in this survey, agreement between the Prior Survey H-8106 and the present survey was extremely poor. However, general trends in depth agreement were apparent. The area north of Latitude 30°43.0'N and south of Latitude 30°41.5'N, showed an average difference of two feet, with H-8106 having the shoaler depths. The area encompassed by Latitudes 30°41.5'N, to 30°43.5'N and Longitudes

81°21.0'W to 81°23.5'W appeared to have generally 3 feet shoaler depths on H-8106 than the current survey as well as discrepancies of four feet or greater, both inside and outside the channel. Between Latitudes 30°42.0'N to 30°43.0'N and Longitudes 81°23.5'W to 81°24.5'W, is where the greatest number of discrepancies were found. The prior survey soundings were shoaler, with differences in depths as great as twenty feet (30°42.15'N, 81°23.7'W).

There was also poor agreement with H-5690, having discrepancies too numerous to list. However, the area north of Latitude 30°43.0'N, generally had a difference of only two feet, with prior soundings being deeper than the present survey. The area encompassed by Latitudes 30°42.0'N to 30°42.6'N, and Longitudes 81°23.5'W to 81°24.5'W, showed a reverse of the trend of prior survey soundings being shoaler by nearly nine feet, on the average, and as great as 15 feet (30°42.1'N, 81°23.8'W).

It was also noticed that agreement between the two prior surveys H-5690 and H-8106 was extremely poor. An example of such discrepancies is the 6-foot shoal at 30°42.15'N, 81°23.7'W on the 1954-55 survey (H-8106), which did not exist on the 1934 survey (H-5690) nor could it be found on the present survey. (This area was investigated by 50 meter spacing of sounding lines, Positions #393-397, 1150-1152 and 1168-1173.)

It is recommended that the soundings obtained on the present survey, especially the in-shore area, supersede the depths from prior surveys. *Concur*

The presurvey review Item #7, dangerous submerged wreck, charted at Latitude 30°43.²⁶'N, Longitude 81°23.⁵⁸'W was investigated and located, and a ^{cleared} least depth determined by the NOAA Ship RUDE and HECK in 1974 (40-6-74). For further information, please refer to Descriptive Report for SP-AMC-6-RU/HE-74. (FE No 1, 1979 WD.) *see Verifiers Report sec. 6.*

L. COMPARISON WITH THE CHART *See also the Verifiers Report section 7.*

This survey was compared with NOAA Chart 11503 (29th Edition, 9 July 1977), scale 1:20,000. Soundings between the chart and the present survey were in poor agreement, especially in the inshore area of the survey. Chart 11503 has shoaler depths, in general, than those obtained on the current survey. Due to the dynamic nature of the area involved, (strong currents and sand bottom), disagreement between the chart and contemporary survey was expected. Individual sounding discrepancies were not tabulated due to the excessive amount of these items. *concur*

The disposal area, located at 30°41.5'N, 81°22.1'W, was developed using 50 meter sounding lines. This area is designated as an active spoil area, however, in Florida, new laws have forbidden the dumping of dredge materials in any off shore

area. Thus, extra soundings were obtained since it was questionable as to the area's current status. See Verifiers Report-section 7a.

M. ADEQUACY OF SURVEY

HSB-10-4-78 (H-9799) is a thorough survey of the area covered by the limits of this boatsheet. It is complete and adequate to supersede prior surveys for charting. All fathograms and field survey records were scanned and checked for peaks and deeps, and appropriate changes were made to the original records when necessary. *Concur*

N. AIDS TO NAVIGATION

Comparison of the aids to navigation to the Light List, Vol. II, 1979, showed nine aids to navigation in the immediate survey area. At the time of survey, all the descriptions of the aids in the Light List agreed with those acquired during operations. However, due to the widening and dredging of the entrance channel, only one buoy was found to be in its charted location: the "W or OR" buoy, marking the seaward end of the south jetty.

The following are new geographic positions of the other eight buoys that were found to be off their charted location:

<u>BUOY</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	
B "5"	30/42/34	81/22/39	pos 874
R "2"	30/42/46	81/21/58	pos 872
R "4"	30/42/44	81/22/41	pos 875
R "8"	30/42/41	81/23/21	pos 876
N "10"	30/42/40	81/23/44	pos 879
C "3"	30/42/33	81/22/06	pos 873
C "7"	30/42/31	81/23/14	pos 877
B "11"	30/42/32	81/23/53	pos 880
C "8"	30/42/28	81/24/06	pos 881

According to the Coast Guard's Local Notice to Mariners, LNM 41-78 and LNM 13-79, these buoys have only been temporarily located. In addition, several changes of buoys' numbers and the establishment of some new buoys will take place in the near future. Plans now call for approximately sixteen buoys to mark the entrance channel, starting with the sea buoy, STM Buoy 1, heading westward toward the jetties. It may also be necessary to move the sea buoy further eastward to more accurately mark the beginning of the dredged channel into Kings Bay. For further information, contact the Aids to Navigation section of the Seventh Coast Guard District, Miami, Florida.

Due to the temporary location of the buoys, plus the current dredging of the channel, it was not possible for the hydrographer to ascertain whether or not the aids adequately marked the channel.

After visual inspection from the survey area, Chart 11503 was found to be lacking several of the more prominent landmarks that are needed for navigation. Several of these landmarks were found on the Intercoastal Waterway Chart, NOAA Chart 11489, and should also be included on Chart 11503 as well. These Aids to Navigation are listed on the NOAA Form 76-40, Landmarks for Charts, which is included in the separates following the text. No other aids are recommended by the hydrographer.

O. STATISTICS

NOAA Launch 1008 was the only vessel used on this survey, ^{The launch} ~~which obtained~~ 214.8 nautical miles of sounding lines, covering 14.6 square nautical miles with 1260 positions and 25 bottom samples. Refer to the Abstract of Positions in the separates following the text for further information concerning statistics.

P. MISCELLANEOUS

The area covered by this survey is subject to continuous change in bottom profile due to strong currents and sand bottom. Hence, prior survey features such as the 6-foot shoal on H-8106, (1954-1955) (30°42'09"N, 81°23'42"W), could not be found nor was there any indication of the items existing at the time of the present survey.

It should also be noted that during the times of hydrography, the St. Marys Entrance channel was being dredged by the Army Corps of Engineers, Jacksonville District. Post dredging surveys will be forwarded to the Processing Division, Atlantic Marine Center, at the completion of the dredging. *Copies of those surveys have been forwarded to NOS C322 by the C. of E.*

Tidal data for smooth tides were requested by field personnel at the end of each month that hydrography was obtained for this survey. Tide gage records plus the request for smooth tides were sent to the Tides and Water Levels Branch, Rockville. Copies of these letters are included in the separates following the text.

Q. RECOMMENDATIONS

It is recommended that the contemporary survey replace the soundings obtained by prior surveys and a warning be placed on the chart indicating that the bottom profile is subject to constant change, especially in the vicinity of the jetties.

It is recommended that revisory photography be flown to update shoreline changes caused by the dredging operations presently underway.

There are no other recommendations other than those previously mentioned in the text.

R. AUTOMATED DATA PROCESSING

Data acquisition and processing were accomplished as per instructions in the Hydrographic Manual, 4 th Edition, and the AMC Manual. Sounding and position data were obtained by the hydroplot/hydrolog system utilizing computer program RK111.

For each master tape, there is a corresponding corrector tape which includes the vessel's TRA and the Del Norte daily correctors, along with all depth corrections including missed depths, peaks, deeps and time and course corrections for Del Norte busts.

Computer programs used during this survey are included in the following list of programs.

<u>PROGRAM</u>	<u>NAME</u>	<u>VERSION DATE</u>
RK111	Range-Range Real Time Hydroplot	1/30/76
RK201	Grid, Signal & Lattice Plot	4/18/75
RK211	Range-Range Non-Real Time Plot	1/15/76
RK330	Reformat and Data Check	5/4/76
PM360	Electronic Corrector Abstract	3/21/74
AM500	Predicted Tide Generator	11/10/72
RK562	Geodetic Calibration	9/10/74
RK602	Elinore	5/21/75

S. REFERENCES TO REPORTS

Signal Report, CM-7804, Kings Bay to St. Marys Entrance, Georgia, 1978. (*Not received*)

Descriptive Report, SP-AMC-6-RU/HE-74, Wire Drag, *FE No 3, 1979 WD.*

Respectively submitted,

For Robert Lewis
Kathy Andreen
Lt., NOAA

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

CORRECTIONS IN FEET, FATHOMS

NOAA FORM 13-21
11D-72

U.S. DEPARTMENT OF COMMERCE
NOAA
NATIONAL OCEAN SURVEY

VELOCITY CORRECTIONS

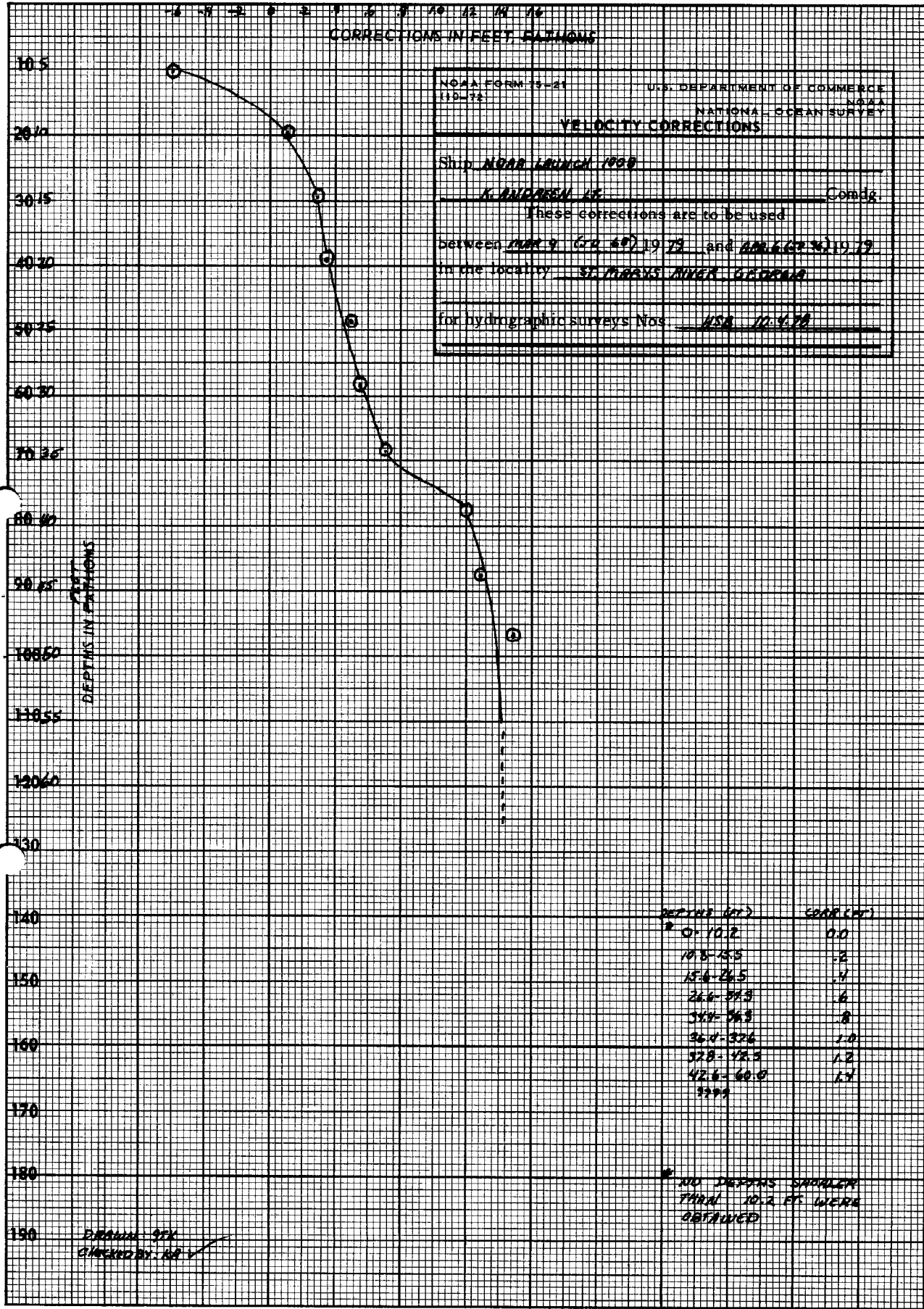
Ship NOAR LAUNCH 1880

K. ANDERSON LT Comdg

These corrections are to be used
between MAR 9 (02 48) 19 19 and APR 6 (02 32) 19 19
in the locality ST. MARYS RIVER GEORGIA
for hydrographic surveys Nos. USA 11-478

(For deep water add a 0 to these figures)

DEPTHS IN FATHOMS



DRAWN BY SPK
CHECKED BY HR

* NO DEPTHS SHALLOWER THAN 10.2 FT WERE OBTAINED

VELOCITY TABLE #1

HSB-10-4-78 H-9799

VESNO: 1008 YR: 79

DAYS: 68-96

000102 0 0000 0001 000 100800 010478 ✓

000155 0 0002 ✓

000265 0 0004 ✓

000343 0 0006 ✓

000363 0 0008 ✓

000376 0 0010 ✓

000425 0 0012 ✓

000600 0 0014 ✓

999999 0 0014 ✓

VKA

PRELIMINARY VELOCITY TABLE

HSB-10-4-78 H-9799

USED FOR SMOOTH PLOT ONLY

000056 1 0006 0001 000 100800 010478 ✓

000063 1 0004 ✓

000073 1 0002 ✓

000087 0 0003 ✓

000170 0 0002 ✓

000295 0 0004 ✓

000370 0 0006 ✓

000395 0 0008 ✓

000425 0 0010 ✓

000467 0 0012 ✓

000520 0 0014 ✓

000600 0 0016 ✓

999999 0 0016 ✓

VICA

SIGNAL TAPE LISTING

OPR-C324

HSB-10-4-78 H-9799

* 122 3 30 44 20591-081 29 13638- 139-0000 000000 C.S. RANGE B, FRONT LT., 1978
*126 3 30 42 27023-081 27 54272- 139 0000 000000 ST. MARYS ENT. FRONT RANGE LT. 1978
134 3 30 45 11037-081 27 39499- 250-0000 000000 S.F. 28
136 3 30 42 06502-081 26 03181- 250-0006 000000 FERNA, 1954
*277 3 30 42 55543-081 27 10432- 250-0000 000000 H-62-02-GA-78.
**203 3 30 40 22552-081 26 33522- 254-0035 000000 AM^ELIA IS. LTHOUSE (ECC), 1978

* STATIONS LOCATED BY PHOTO PARTY #62

** STATIONS LOCATED BY PHOTO PARTY #61

ALL OTHER STATIONS WERE RECOVERED BY HYDROGRAPHIC FIELD PARTY #2 AND PHOTO PARTY #62

VKA

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

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

ORIGINATING ACTIVITY

HYDROGRAPHIC PARTY
 GEODETIC PARTY
 PHOTO FIELD PARTY
 COMPILATION ACTIVITY
 FINAL REVIEWER
 QUALITY CONTROL & REVIEW GRP.
 COAST PILOT BRANCH

(See reverse for responsible personnel)

REPORTING UNIT
(Field Party, Ship or Office)
HSB-HFP2

STATE
Florida/Georgia

LOCALITY
St. Marys Entrance

DATE
4/26/79

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

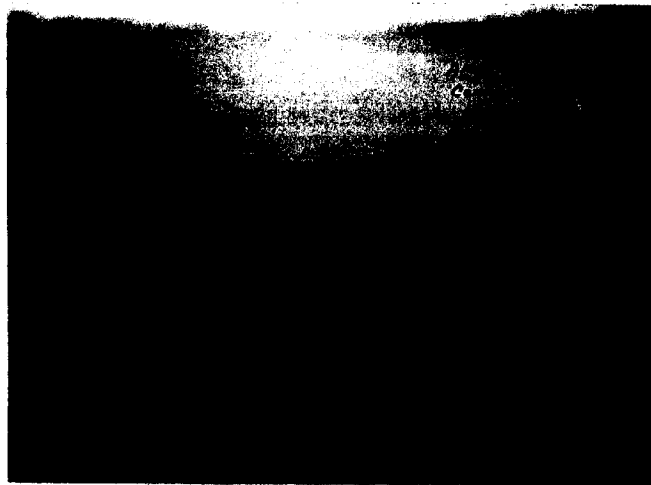
OPR PROJECT NO.
OPR-G324

SURVEY NUMBER
H-9799
HSB-10-4-78

DATUM
NA1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.)	POSITION		METHOD AND DATE OF LOCATION (See instructions on reverse side)	CHARTS AFFECTED
		LATITUDE	LONGITUDE		
		° / ' D.M. Meters	° / ' D.P. Meters		
STACK	Fernandina, American Container Corporation, North Stack	30 40.9'	81 27.3'	F-Vis-V (4/79) TP-000202	11503
STACK	St. Mary's Gilman Paper Company Stack	30 44	81 32	F-3-6-L (6/78) Photo Pty 61	11503
TOWER	Fernandina, American Container Tower	30 40.9'	81 27.3'	F-Vis-V 4/26/79	11503
BUILDING	Amelia-By-The-Sea North Condominiums	30 37.2'	81 26.3'	F-Vis-V (4/79) Chart 11489	11503
BUILDING	South Condominiums	30 37.1'	81 26.4'	F-Vis-V (4/79) Chart 11489	11503
STACK	Fernandina Rayonier Stack (tallest)	30 39.7'	81 28.3'	F-Vis-V Chart 11489	11503
STACK	Fernandina, American Container Corporation, South Stack	30 40.9'	81 27.3'	F-Vis-V (4/79) TP-000202	11503

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Kathy Andreen, LT., NOAA
POSITIONS DETERMINED AND/OR VERIFIED	Kathy Andreen, LT., NOAA
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)	
OFFICE	FIELD (Cont'd)
<p>I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75</p>	<p>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982</p>
<p>FIELD</p> <p>I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection</p> <p>A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75</p> <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p>	<p>II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75</p> <p>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75</p> <p>**PHOTOGAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p>



RESPONSIBLE PERSONNEL

NAME

A. Bryson

A. Bryson

F. Margiotta

TYPE OF ACTION

OBJECTS INSPECTED FROM SEAWARD

POSITIONS DETERMINED AND/OR VERIFIED

FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES

ORIGINATOR

- PHOTO FIELD PARTY
- HYDROGRAPHIC PARTY
- GEODETIC PARTY
- OTHER (Specify)

FIELD ACTIVITY REPRESENTATIVE

OFFICE ACTIVITY REPRESENTATIVE

REVIEWER

QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64.)

FIELD (Cont'd)

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

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

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

- F - Field
- L - Located
- V - Verified
- 1 - Triangulation
- 2 - Traverse
- 3 - Intersection
- 4 - Resection
- 5 - Field Identified
- 6 - Theodolite
- 7 - Planetable
- 8 - Sextant

A. Field positions* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L
8-12-75

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

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

II. TRIANGULATION STATION RECOVERED

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

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.
EXAMPLE: V-Vis. 8-12-75

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

RESPONSIBLE PERSONNEL		ORIGINATOR
TYPE OF ACTION	NAME	
OBJECTS INSPECTED FROM SEAWARD	A. Bryson	<input checked="" type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODEIC PARTY <input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED	A. Bryson	FIELD ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	F. Mauldin	<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'
 (Consult Photogrammetric Instructions No. 64.)

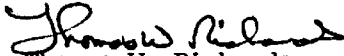
OFFICE	FIELD (Cont'd)
1. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-y 8-12-75 74L(C)2982
FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field Identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75 *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

APPROVAL SHEET

Navigable Area Survey H-9799 (HSB-10-4-78)

The hydrographic records transmitted with this survey are complete and adequate to supersede prior surveys in the common area with no additional field work recommended.

Direct daily supervision was not given by me during the field work.



Thomas W. Richards

Lt. Cdr., NOAA

Chief, Hydrographic Surveys Branch

FIELD TIDE NOTE
OPR-G324

Field tide reduction of soundings was based on predicted tides for St. Marys Entrance, north jetty, using Savannah River Entrance as the reference station. Using Program AM500, predicted tide tapes were constructed converting all times to GMT.

The following tide gages were installed during the 1978 and 1979 season:

<u>SITE & NUMBER</u>	<u>LOCATION</u>	<u>PERIOD</u>
*St. Marys Entrance N. Jetty, Georgia #867-9997	30°43.1'N 81°26.7'W	11/7/78 End of Survey
**Platform #872-0008	30°42.3'N 81°28.15'W	11/8/78 End of Survey
**Range "A" Light Tower #867-9909	30°43.6'N 81°29.9'W	11/6/78 End of Survey
**Dungeness - Seacamp Dock #867-9758 *Bubbler gage **ADR Gage	30°45.6'N 81°28.3'W	11/3/78 End of Survey

During the times of operation, the following problems were encountered concerning the specified gages:

The orifice for the North Jetty gage was located too far inshore to adequately record extreme low tides (i.e., any negative tides). This problem was not discovered until several weeks after the installation of the gage when a negative tide occurred leaving the orifice bare of water. Due to the excessive amount of exposed tubing involved in relocating the orifice, it was decided to leave it in its original location and not to obtain soundings during negative tides. Bottom samples and detached positions on buoys were taken during a negative tide (JD 087), however. From November 7, 1978 to February 9, 1979, when the gage read zero tide, the orifice was awash. After February 9th, the orifice was awash when the gage recorded two feet of tide. This change was made to insure that low tides were not being missed due to the gage pen setting. On December 28, 1978, the original jetty gage, Metercraft, S/N 7603-686-123, was washed out and buried under sand by high winds and tides. Only part of the December tide record was salvageable, (December 1 through December 13). This gage was replaced on January 10, 1979 by another Metercraft, S/N 7603-707-135, with the gage being set farther inland

(orifice location remained the same). March 1, 1979, the tubing from the orifice to the gage was broken and repaired on the 6th of March. It should also be noted that on several occasions, the nitrogen to the gage was turned off by unknown persons.

The ADR on the cement platform (#872-0008) had erratic differences between staff and gage during January and early February. (There was no hydrography accomplished during this time.) After resetting the gage to correspond with the staff the problem disappeared.

Erratic differences between staff and gage also occurred with the other Leupold Stevens ADR at Range "A". This gage was replaced with a Fisher Porter gage on the 8th of December 1978. The problem was no longer experienced.

The ADR gage values were set ten feet higher than staff values. The bubbler gage was originally set with the gage zero equal to the staff zero and later changed to read two feet higher than the staff. All gages were set to local time (EST), and all records were sent to the Tides and Water Levels Branch, Rockville. All gages were leveled at time of installation and will be releveled at time of removal.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Hydrographic Field Party #2
P.O. Box 1160
Fernandina Beach, Fla. 32034

March 15, 1979

To: Chief, Tides Branch, C331

From: LT Kathryn A. Andreen
OIC, Hydrographic Field Party #2

Subject: Request for Tide Data

Please furnish tide data to AMC Processing Division for Surveys HSB-5-2-79,
(H-9800) and HSB-5-1-79, Project OPR-G324-HFP-78.

See enclosed field tide note and chartlet for gages operated.

The following times of hydrography include two hours before and after
actual times:

H-9800, HSB-5-2-78

<u>J.D. 1978</u>	<u>Hydro Begins (GMT)</u>	<u>Hydro Ends (GMT)</u>	<u>Area of Hydro</u>
320	1400	2100	81/25/45 to 81/26/15W
321	1400	2200	81/25/45 to 81/26/45W
325	1400	2300	81/27/30 to 81/28/15W
332	1300	2200	81/24/15 to 81/25/00W
333	1300	2300	81/24/45 to 81/25/45W
347	1500	2300	81/26/30 to 81/27/45W

J.D. 1979

033	1400	2300	81/24/32 to 81/25/55W
043	1300	1900	81/24/15 to 81/24/45W
044	1400	2100	81/27/00 to 81/28/00W
045	1300	2200	81/24/25 to 81/28/15W
046	1300	2200	81/26/30 to 81/28/00W
047	1300	2100	81/26/15 to 81/28/00W

HSB-5-1-79

J.D. 1979

039	1400	2000	30/43/03 to 30/43/48N
			81/29/03 to 81/29/30W
053	1300	2200	30/42/48 to 30/43/47N
			81/28/46 to 81/29/45W





U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
 NATIONAL OCEAN SURVEY
 Hydrographic Field Party #2
 P.O. Box 1160
 Fernandina Beach, Fla. 32034

April 4, 1979

To: Chief, Tides Branch, C331

From: LT Kathryn A. Andreen
 OIC, Hydrographic Field Party #2

Subject: Request for Tide Data

Please furnish tide data to AMC Processing Division for Surveys HSB-5-2-79, (H-9800); HSB-10-4-78, (H-9799); and HSB-5-1-79, Project OPR-C324-HFP-78.

The following times of hydrography include two hours before and after actual times:

HSB-5-1-79

<u>J.D. 1979</u>	<u>Hydro Begins (GMT)</u>	<u>Hydro Ends (GMT)</u>	<u>Area of Hydro</u>
061	1400	2200	30/14/00 to 30/14/30 81/28/53 to 81/29/42
071	1600	2300	30/42/21 to 30/42/45 81/28/12 to 81/28/57

HSB-5-2-78, H-9800

087	1400	2400**	81/26/06 to 81/24/10
-----	------	--------	----------------------

HSB-10-4-78, H-9799

068	1500	2300	East of 81/24/15
072	1500	2300	East of 81/24/15
078	1600	0100 (JDO79)	East of 81/24/15
079	1600	2400	East of 81/24/15
080	1300	2300	East of 81/24/15

** Only bottom samples and detached positions on buoys were taken after 1720 (GMT) on this day due to negative tides.





U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Hydrographic Field Party #2
P.O. Box 1160
Fernandina Beach, Fla. 32034

April 11, 1979

To: Chief, Tides Branch, OYJ1

From: LT Kathryn M. Anderson
CIC, Hydrographic Field Party #2

Subject: Request for Tide Data

Please furnish tide data to ANS Processing Division for Survey HSB-10-4-78
(N-9799), Project OPR-0324-NFF-78.

The following times of hydrography include two hours before and after
actual times:

HSB-10-4-78

<u>J.D. 1979</u>	<u>Hydro Begin (GMT)</u>	<u>Hydro Ends (GMT)</u>	<u>Area of Hydro</u>
096	1300	0100 (J.D.097)	East of 81/24/15



16



June 12, 1979 U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 872-0008 Platform, FL

Period: March 9 - April 6, 1979

HYDROGRAPHIC SHEET: H-9799

OPR: G 324

Locality: St. Marys Entrance, Georgia - Florida

Plane of reference (mean ~~lower~~ low water): 1.16 ft.

Height of Mean High Water above Plane of Reference is
5.8 ft.

Remarks: Recommended zoning:

Outside of St. Marys Entrance jetty.

Apply -20 minute time correction to high waters, -5 minute time
correction to low waters and x0.97 range ratio.

Milton S. Rubenstein
for _____
Chief, Datums and Information Branch

June 12, 1979 U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 872-0008 Platform, FL

Period: March 9 - April 6, 1979

HYDROGRAPHIC SHEET: H-9799

OPR: G 324

Locality: St. Marys Entrance, Georgia - Florida

Plane of reference (mean ~~lower~~ low water): 1.16 ft.

Height of Mean High Water above Plane of Reference is
5.8 ft.

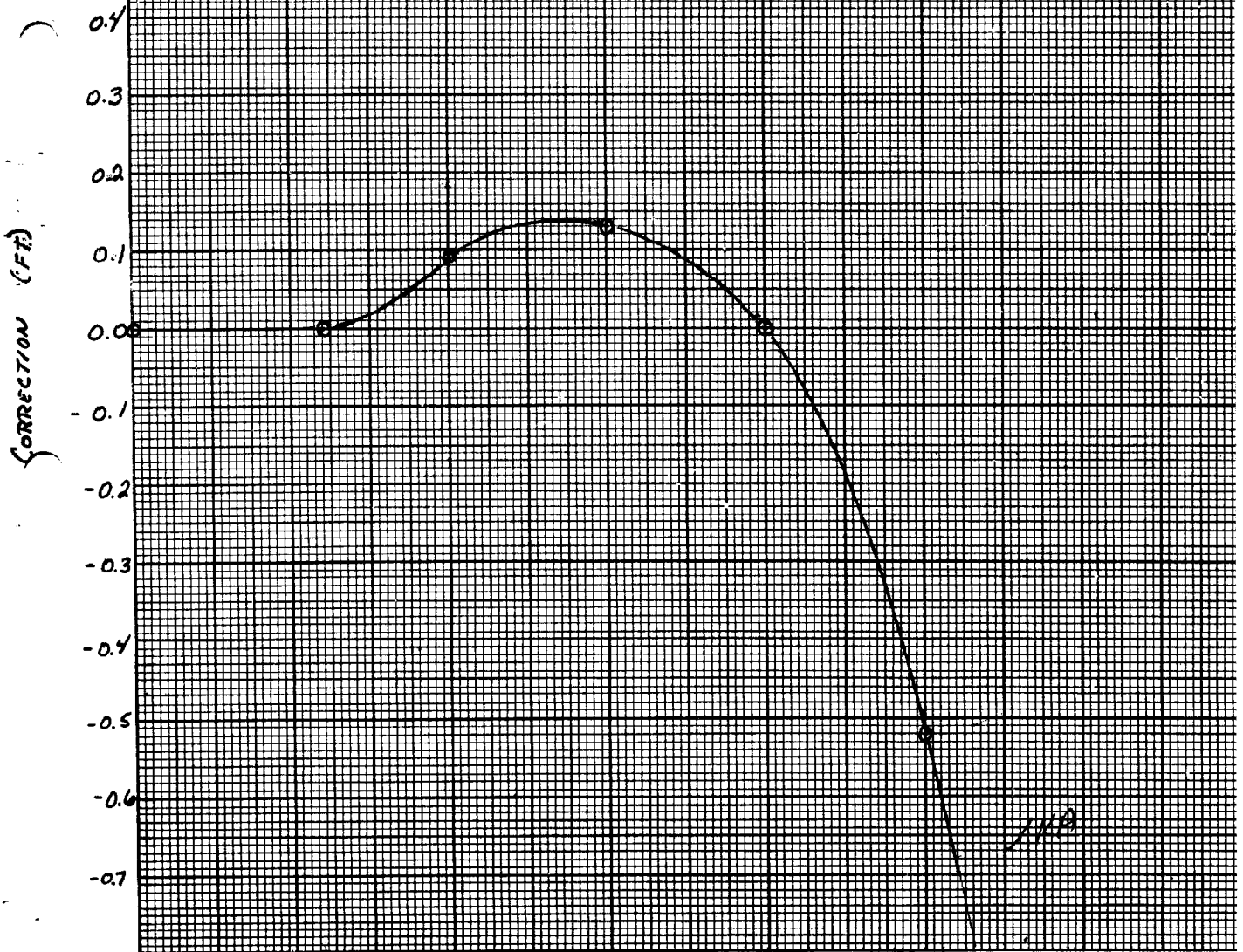
Remarks: Recommended zoning:
Outside of St. Marys Entrance jetty.
Apply -20 minute time correction to high waters, -5 minute time
correction to low waters and x0.97 range ratio.

Milton S. Rutstein
for _____
Chief, Datums and Information Branch

SETTLEMENT & SQUAT
LAUNCH 1008
MARCH 22, 1979

ABSTRACT

RPM's	CORRECTION (FT)
0 - 1030	0.01
1031 - 1700	+0.1
1701 - 2150	0.0
2151 - 2550	-0.2
2551 - 2700	-0.5
2701 - 2600	-0.6



0 SPEIDEL & SONS INC., FERNWOOD PENNA. 1500 2000 2500 3000
20X20 TO THE INCH 5, 10, 20TH LINE ACCENTED

RPM's

GEOGRAPHIC NAMES (*Field*)

H-9799

Name on Survey	Source of Name											
	A	B	C	D	E	F	G	H	K			
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	GRAND McNALLY ATLAS	U.S. LIGHT LIST				
St. Marys Entrance	11503											1
<i>Atlantic Ocean</i>	11503											2
<i>Georgia</i>	11503											3
<i>Florida</i>	11503											4
												5
												6
												7
												8
												9
												10
												11
												12
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												23
												24
												25

Approved:

Chas. E. Hamilton

Chief Geographer - C3x5

12 Dec 1979

APPROVAL SHEET
FOR
SURVEY H-9799

- A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position printout has/~~has not~~ been made. A new final sounding printout has/~~has not~~ been made.
- B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic Manual. Exceptions are listed in the Verifier's Report.

Date: 10-1-79

Signed:



Title:

Chief, Verification Branch

HYDROGRAPHIC SURVEY STATISTICS

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT
SMOOTH SHEET		1	BOAT SHEETS & PRELIMINARY OVERLAYS		3
DESCRIPTIVE REPORT		1	SMOOTH OVERLAYS: POSCARC, EXCESS		2

DESCRIP-TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1 - with printouts & misc. data					
VOLUMES	1					
BOXES			1 - Smooth			

T-SHEET PRINTS (List)

SPECIAL REPORTS (List)

1 - junction strip

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	PRE-VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			1260
POSITIONS CHECKED		1260	
POSITIONS REVISED		4	
SOUNDINGS REVISED		49	
SOUNDINGS ERRONEOUSLY SPACED		0	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	
	TIME - HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	5		
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS		12	
VERIFICATION OF SOUNDINGS		65	
COMPILATION OF SMOOTH SHEET		44	
APPLICATION OF TOPOGRAPHY		1	
APPLICATION OF PHOTOBATHYMETRY			
JUNCTIONS		2	
COMPARISON WITH PRIOR SURVEYS & CHARTS		7	
VERIFIER'S REPORT		16	
OTHER		34	
TOTALS	5	181	186

Pre-Verification by H.R. Smith	Beginning Date 05/01/79	Ending Date 05/01/79
Verification by S. Kelley, R. Keene, J. Bradford	Beginning Date 05/23/79	Ending Date 09/06/79
Verification Check by R.G. Roberson	Time (Hours) 8	Date 09/24/79
Marine Center Inspection by Hydrographic Inspection Team (AMC)	Time (Hours) 8	Date 09/27/79
Quality Control Inspection by <i>R. W. Wellman</i>	Time (Hours) 36 ⁴⁰	Date 12-5-79
Requirements Evaluation by <i>R. Baumgardner</i>	Time (Hours) 3	Date 4-23-79

D. Myers 3 hrs 1/19/80

REGISTRY NO. _____

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

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

CARDS CORRECTED

DATE _____ TIME REQUIRED _____ INITIALS _____

REMARKS:

REGISTRY NO. H-9799

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE 6-16-82 TIME REQUIRED _____ INITIALS JAC

REMARKS:

ATLANTIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO.: H-9799

FIELD NO.: HSB-10-4-78

Georgia, Florida, ~~Atlantic Ocean~~, St. Marys Entrance

SURVEYED: 9 March through 6 April 1979

SCALE: 1:10,000

PROJECT NO.: OPR-G324-
HFP-78

SOUNDINGS: Ross Digital
Echo Sounder

CONTROL: Range-Range
(Del-Norte)

Chief of Party T.W. Richards
Surveyed by K. Andreen
Automated Plot by XYNETIC 1201 Plotter (AMC)
Verified and Inked by J.S. Bradford
Date September 7, 1979

1. Introduction

This survey encompasses a pie-shaped area with western limits of latitude 30°42'30" and 30°43'00" longitude 81°23'20" and eastern limits of latitude 30°40'50" and 30°45'00" longitude 81°21'00" at St. Marys Entrance.

The projection parameters submitted by the field party have been revised to center the hydrography on the smooth sheet. These parameters are appended to the smooth printouts.

Actual tide correctors have been applied to the smooth sheet from tide station 872-0008 Platform, Florida with time and range correctors. Field reduction of soundings were based on predicted tides for St. Marys Entrance as the reference station.

Velocity and other applicable corrector tables are appended to the smooth sounding printout.

2. Control and Shoreline

No shoreline is shown on this survey. T.P.S.

Shoreline transferred to this survey is from a 1:10,000 chart enlargement, NOAA Chart #11503, for orientation only*. No shoreline manuscripts are available in the office (See appended letter dated 30 Aug 1979 -- John D. Perrow, Jr.)*. *The chart enlargement was not forwarded with the survey*
Jetties were added from Class III topo surveys TP-00201&203 of 1978 records.
Control stations and position control used during this survey are discussed in Sections F. and G. of the Descriptive Report.

3. Hydrography

Line spacing as accomplished by the sounding vessel is adequate to define the standard depth curves and delineate the bottom configuration.

No significant least depths were found during the process of surveying. Shoals have been properly defined and their least depths represented on the smooth sheet.

Crosslines are in good agreement within one foot.

There are 25 bottom samples incorporated in the survey which satisfactorily portray the bottom characteristics.

4. Condition of Survey

All accompanying overlays, hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual except for the following:

- a. Bar checks were taken once daily.
- b. Time annotations on the analogs at the beginning of the day were non-existent resulting in no cross check. Times ~~were~~ entered in the sounding volume are from the printouts.
- c. There is no record of the control report (CM-7804) having been received. No report was located.

5. Junctions

H-9799 joins H-9428, 1:40,000 (1974) to the east. Soundings were compared and found to be in excellent agreement with differences less than one foot. There were no curves in the junction area. Junction note has been inked. (See Q.C. Report-item 1)

The junction with H-9800, 1:10,000 (1979) was not effected due to its stage of processing. Junctions will be accomplished during its sounding verification. Junction note and curves are penciled.

There are no contemporary surveys to the northwest or southwest limits of this survey.

No junction was effected with H-8106, 1:10,000 (1955). This bottom is very unstable and has been dredged since that data. As a result this survey was considered and addressed as a prior survey in Section 6. of this report.

6. Prior Survey Comparison

a.	H-5690	(1934)	1:10,000
	<u>H-8106</u>	<u>(1955)</u>	<u>1:10,000</u>

In addition to the hydrographer's comments in Section K. of the

Descriptive Report the following is submitted:

H-5690

Within the area of common hydrography, major differences in soundings are apparent. There is as much as ten-foot differences shoaler or deeper depending on the area investigated. Dredging operations have been employed since the date of the ^{prior} survey thus contributing to the aforementioned discrepancies. In addition to dredging, the noted depth differences are also attributed to natural causes. ^{also} *(See Q.C. Report-item 2a)

H-8106

The present survey is generally shoaler by one to five feet.* Shoal features have seemingly migrated or extended to the north-west. The soundings off the jetty ends are comparable but showing some scouring ^{with} dredging effects ^{also} are apparent. *(See Q.C. Report-item 2-b)

H-9799 is adequate to supersede the above prior surveys in the areas of common coverage. Differences may be attributed to dredging, unstable bottom and modern survey methods.

b. F.E. No. 1, 1979 W.D. (surveyed in 1974)

Conflicts of up to 3 feet, the present survey being shoaler, exist between swept depths and present survey depths. These differences are attributable to the changeable nature of the bottom in the common area. (See Q.C. Report-items 3 and 4).

PSI #7 - Submerged wreck charted at latitude 30°43'15"N. longitude 81°21'30"W, is addressed in Section K, of the Descriptive Report. Copies of the pertinent sections of the Descriptive Report for F.E. No. 1, 1979 WD are appended.* The 39-foot cleared depth should be charted as ~~previously~~ recommended in the Descriptive Report for FE No 1, 1979, W.D.
* Filed with the field records

7. Comparison With Chart #11503 (29th Edition, July 9, 1977)

a. Hydrography

In addition to the hydrographer's comments in Sections L. and P. of the Descriptive Report the following is submitted:

The source of charted soundings originating with prior surveys are appropriately indicated on the appended chart mark-up. Those soundings not identified originate from ^{with not readily} ~~unascertainable~~ sources.

The charted depths originate with the previously discussed prior surveys supplemented by U.S. Army Corps of Engineers Survey and ~~possibly other unascertainable~~ ^{some not readily} sources. This charted information need not be further considered except as follows:

The disposal area at latitude 30°41'30", longitude 81°22'00" was developed and the least depth found was 23 feet. This shows an eastward migration of the 30 foot contour. Present survey depths should be charted in this area.

The present survey is adequate to supersede the charted Hydrography within the common area, *except as noted in section 7b of this report.*

b. Controlling Depths

The depths shown in the tabulation on the chart do not agree with the present survey in the common area. The controlling depth for the common portions is 27 feet. This is deeper than the tabulation and is a result of dredging in the channel.

It should be noted that this channel has a new project depth of 40 feet. The entire tabulation through Cumberland Sound into Kings Bay should be revised to reflect the new project depths. U.S. Army Corps of Engineers surveys of the area should be consulted.

c. Aids to Navigation

Aids (fixed and floating) are adequately discussed in Section N. of the Descriptive Report. (See Q. C. Report-item 5)

8. Compliance With Instrucitons

This survey complies with Project Instructions dated 31 July, 1978, change No. 1 dated 20 Sept. 1978, and change No. 2 dated 7 Nov. 1978.

9. Additional Field Work

This is an excellent basic survey with no additional field work required.



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

OA/C352:KWW

December 5, 1979

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

THRU: Chief, Quality Control Branch *gmc*

FROM: K. W. Wellman *K. W. Wellman*
Quality Evaluator

SUBJECT: Quality Control Report for H-9799 (1979), Georgia--Florida,
St. Marys Entrance.

A quality control inspection of H-9799 was accomplished to monitor the survey for obvious deficiencies with respect to data acquisition, delineation of the bottom, determination of least depths and navigation hazards, junction, decisions and actions by the verifier, and cartographic presentation of data.

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

1. Reference section 5 of the Verifier's Report:

a. The comments pertaining to the depth differences in the area of overlap between the present survey and H-9428 (1974) are incorrect. Depth differences of as much as 6 feet are noted in the vicinity of latitude 30°41.20'N, longitude 81°21.15'W. Therefore, a partial butt junction was made with survey H-9428 during quality control because of changes in the bottom. Accordingly, a limited area in proximity to the noted conflicting depths has been designated as superseded on H-9428. Except as noted above, an adequate junction has been effected between the present survey and H-9428.

b. The necessity of adding a junctional note to adjoining survey H-9428 should have been discussed in the referenced section of the Verifier's Report. (See OA/C35x2 memo, March 21, 1977, "Verifier's Report Format.")

2. Reference section 6-a of the Verifier's Report:



The comments pertaining to depth differences between the prior and present surveys are in error. Random depth differences exceeding those indicated in the referenced section of the Verifier's Report were noted during quality control inspection.

The following statements supersede cross-referenced comments made in section 6-a of the Verifier's Report:

a. The comparison between the present survey and H-5690 revealed depth differences ranging from scattered areas of good agreement to scattered indications of present depths as much as 19 feet shoaler and 23 feet deeper than prior depths. Maximum deepening of 23 feet is noted within the area of the dredged channel.

b. A comparison between the present survey and H-8106 reveals a variable pattern of depth differences ranging from scattered areas of good agreement to random depth differences of ± 13 feet. Present depths are as much as 15 feet deeper within the area of the dredged channel.

3. Section 6-b of the Verifier's Report is supplemented by the following:

The cleared depths in proximity to the shoaler conflicting soundings on the present survey are invalidated and should be disregarded.

4. Section 6-b of the Verifier's Report is supplemented by the following:

A submerged wreck located in the vicinity of latitude $30^{\circ}43.49'N$, longitude $81^{\circ}21.44'W$ on F.E. No. 1 1979 W.D. was carried forward to supplement the present survey.

5. Section 7-c of the Verifier's Report is deficient in that navigation buoy C "A" charted in the vicinity of latitude $30^{\circ}43.10'N$, longitude $81^{\circ}24.18'W$ is not addressed therein.

Section 7-c of the Verifier's Report is supplemented by the following:

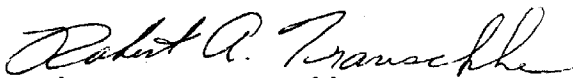
Navigation buoy C "A" charted in the vicinity of latitude $30^{\circ}43.10'N$, longitude $81^{\circ}24.18'W$ was not mentioned by the hydrographer.


cc:
OA/C35
OA/C351

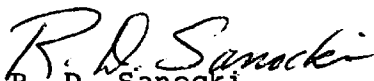
Inspection Report
H-9799

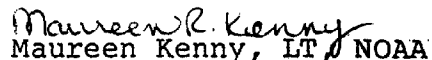
Any verification errors regarding procedures and presentation of survey data detected during inspection by the Hydrographic Inspection Team have been corrected before submission for administrative approval. HIT comments regarding quality of field work, compliance with instructions, and adequacy of the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


Examined and Approved:
Hydrographic Inspection Team
Date: Sept. 27, 1979


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

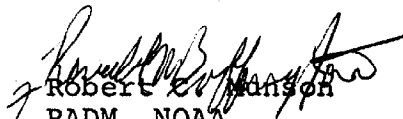

David W. Yeager, Lt. Cdr., NOAA
Field Procedures Officer
Operations Division


R. D. Sanocki
Technical Assistant
Processing Division


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


Billy J. Stephenson
Team Leader
Verification Branch

Approved/Forwarded


Robert W. Stephenson
RADM, NOAA
Director, Atlantic Marine Center



National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

OA/C351:SRB

APR 29 1980

TO: OA/CAM - Richard H. Houlder
FROM: OA/C3 - Roger F. Lanier *Roger F. Lanier*
SUBJECT: H-9799 (1979), OPR-G324-HFP-78, Georgia--Florida, St. Marys Entrance,
Report of Compliance with Project Instructions

The smooth sheet and Descriptive Report for the subject survey have been examined. This survey, except as noted in the Quality Control Report, dated December 5, 1979 (copy attached), and the Hydrographic Survey Inspection Team Report, dated September 27, 1979, is complete and adequate for the purposes intended and is in compliance with Project Instructions OPR-G324-HFP-78, dated July 31, 1978.

Attachment

cc:
OA/C352 w/o att.



10TH ANNIVERSARY 1970-1980
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DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Ocean Survey
Rockville, Maryland

Hydrographic Index No. 75

