

9806

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-5-1-79
Office No. H-9806

LOCALITY

State Georgia/Florida
General Locality .. Cumberland Sound
Locality Tiger Creek to Mill Creek

1979

CHIEF OF PARTY
..... T.W. Richards

LIBRARY & ARCHIVES

DATE March 26, 1980

★ U.S. GOV. PRINTING OFFICE: 1976-669-441

76-40 forms see L-259(19)

9806

Area 3

Chits
11503
11502
11489

HYDROGRAPHIC TITLE SHEET

H - 9806

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-5-1-79

State Georgia/Florida

General locality Cumberland Sound

Locality Cumberland Sound - vicinity Tiger Island Tiger Creek to Mill Creek

Scale 1:5,000

(JD 039) (JD 144)

Date of survey 8 Feb. - 24 May, 1979

Instructions dated 31 July 1978

Project No. OPR-G324-HFP-78*

Vessel Launch 1277

Chief of party CDR Thomas W. Richards

Surveyed by LT Kathy Andreen

Soundings taken by echo sounder, ~~and lead~~, pole Raytheon Fathometer, S/N 2924

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

Graphic record checked by Same

Verification Branch

Field plot - PDP8/e

Protracted by _____

Automated plot by AMC-Xyninetics 12001 AMC

Soundings penciled by Verification L.G. Cram

Soundings in ~~fathoms~~ XXXXXX feet at MLW XXXX

REMARKS: This survey is complete and adequate to supersede prior survey. For

other reference report, see Section "S". Time Meridan: 0° (GMT)

KA - Kathy Andreen

* Change No. 1 (9/20/78)

WS - Wayne Sprye

DB - Danny Bryant

Change No. 2 (11/7/78)

JK - Judy Krauthamer

KK - Krutz Klinefelter

Change No. 3 (2/5/79)

SG - Susan Gilbert

AB - A. Y. Bryson

Change No. 4 (5/9/79)

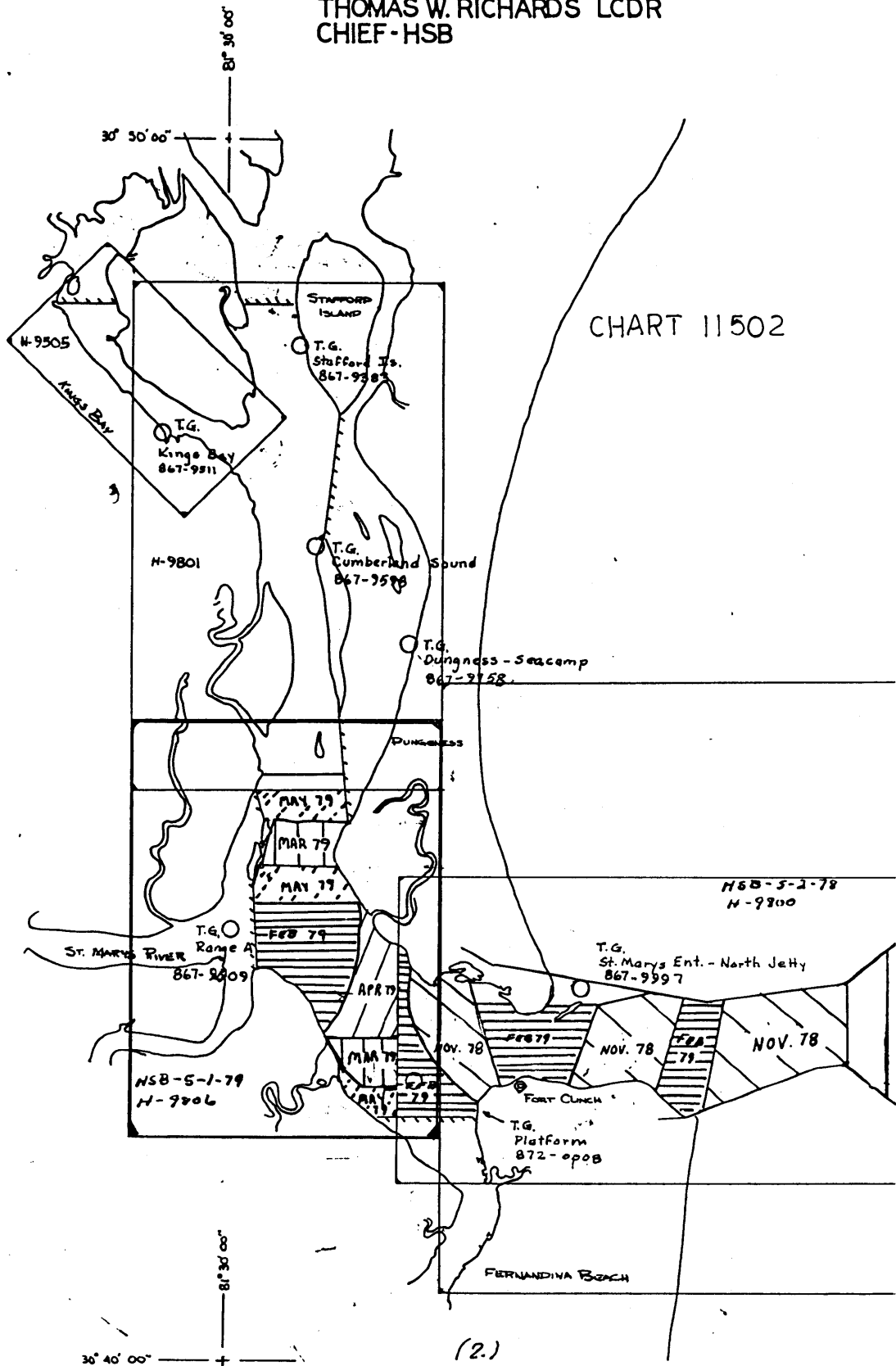
RL - Robert Lewis

Applied to stds 9/10/80

Some notes and changes made in red ink by verifier during

verification (1.)

THOMAS W. RICHARDS LCDR
CHIEF - HSB



DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-9806 (HSB-5-1-79)
NAVIGABLE AREA SURVEY

Scale: 1:5,000

LCDR Thomas W. Richards
LT Kathryn Andreen

Hydrographic Field Party #2
Launch 1277
Chief of Party
Officer-in-Charge

A. PROJECT

This hydrographic survey was conducted in accordance with PROJECT INSTRUCTIONS OPR-G324-HFP-78, St. Marys River to Kings Bay, Georgia, dated July 31, 1978, with the following supplements to instructions: Change No. 1, dated September 20, 1978; Change No. 2, dated November 7, 1978; Change No. 3, dated February 5, 1979; and Change No. 4, dated May 9, 1979.

B. AREA SURVEYED

The area covered by this survey was bound on the east by the shoreline of Cumberland Island and on the west by the western shore of Cumberland Sound (Georgia). The northern limit for this survey was Lat. 30°45'06"N, with 30°42'03"N on the south. The survey commenced on February 8, (JD 39), 1979, and ended on May 24, (JD 144), 1979.

C. SOUNDING VESSEL

NOAA Launch 1277, equipped with a Raytheon fathometer, Model 723-D, was used to obtain all soundings and bottom samples for this survey.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Sounding equipment operated well during the survey, with only a few minor problems. The Raytheon 723-D fathometer (s/n 2924) used on Launch 1277, operated well in depths greater than three feet, but could not consistently sound well in the shoaler areas. Pole soundings were usually obtained for soundings between 0 to 3 feet when using 1277. On several occasions, (JD 039, 053 and 061), the digitizer, s/n 2773, would not properly digitize depths. After the threshold in the ECU was readjusted for a more stable readout as well as replacing the digitizer module in the ECU, this problem disappeared, (March 16, 1979).

Technicians monitored the fathometer continuously during the operations and kept the initial value on the analog trace at zero. All fathograms were scanned twice after hydrography for peaks and deeps as well as 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.

Stylus arm length checks were made routinely with the Raytheon 723-D, by switching from Scale A to F, and noting the 240-foot trace. Adjustments were made if necessary. All sounding poles and bar check lines were measured with a steel tape before and after the survey and were found to be accurate.

Bar checks were taken daily, weather permitting, with depths up to 60 feet whenever possible. It should be noted, that on several occasions bar checks could not be taken due to the combination of strong winds opposing the strong currents in the survey area, thus resulting in loss of the trace. Also, many times it was difficult to obtain digitized values for the bar checks. When this happened, the analog trace was taken and later compared to other bar checks where digitized as well as analog values were recorded. Bar check abstracts, velocity curve and velocity table are included in the separates following the text. Bar checks from both HSB-5-2-78 (H-9800) and HSB-5-1-79 (H-9806) surveys were combined and averaged to construct the velocity curve used for this survey. Any bar check data listed on the abstract that is not submitted with this survey, will be included with the data from HSB-5-2-78 (H-9800).

Settlement and squat for the vessel was determined as outlined in Section 4.9.4.2 of the 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 SHEET

The transverse mercator projection and soundings were plotted using the PDP8/e hydroplot system on Launch 1277, while the logging and editing of tapes was accomplished by using both hydroplot systems on 1277 and in HFP-3's office trailer. Launch 1277, equipped with the PDP8/e computer, s/n 308137, and complot plotter, Model DP-3, s/n 5445-11, was primarily used for gathering raw data and smooth plotting the final field sheet. HFP-3's system equipped with the PDP8/e computer, s/n 08130, was used only for processing the data tapes.

The central meridian for this survey was 81°28'00"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 were not applied due to program problems with the plotting Programs RK212 and RK216. Refer to the Section R,

Automated Data Processing, for information concerning this matter. 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, crosslines, bottom samples and detached positions. Both are at a scale of 1:5000. No discernable distortion could be detected.

F. CONTROL STATIONS ✓

Control stations TIG (USE), 1954; JOL (USE), 1954; St. Marys Entrance Rear Range Light, 1978; Cumberland Sound Range "B" Front Light, 1978 and Cumberland Sound Range "A" Front Light, 1978, were established or verified by Photo Party 62, Coastal Mapping Division, Atlantic Marine Center. The station, St. Marys Entrance Front Range Light, 1979 was 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.

Control station St. Marys Entrance Front Range Light (Signal Number 126) was removed and rebuilt on May 10 (JD 130), 1979. The structure had been previously (September 1978) hit by a shrimp boat, and was tilted at an angle. The geodetic position obtained by Photo Party 62 was for the Range Light before it was leaning, thus the structure was relocated by Photo Party 61 and the new position was used for hydrography from the beginning of hydrography until May 10 (JD 130), 1979. On this date, the Front Range Light was replaced by a new structure. HFP-2 established a geodetic position for the new St. Marys Entrance Front Range Light (#127), by intersection with a Kern theodolite and Program RK300. Refer to Descriptive Report, OPR-G324, HSB-5-2-78 (H-9800) for the computations. Refer to the signal listing included with this report for the control station signal numbers.

G. HYDROGRAPHIC POSITION CONTROL ✓

Del Norte positioning equipment, operating in a range-azimuth mode (using a Del Norte remote unit with a Wild T-2) was used to control the hydrography on sheet HSB-5-1-79 (H-9806). Five control networks were used on this survey for the control stations used. All shore stations were located at established third order triangulation, intersection or traverse stations.

Whenever possible, calibration was established twice daily by positioning the vessel at known third order transverse or intersection stations. Del Norte ranges were compared to ranges calculated by the PDP8/e computer using Program RK407. Refer to the sounding volumes for calibration data, and the abstract of electronic correctors included with this report.

In general, the Del Norte equipment worked well throughout the time of the survey. The only exception was on JD 143 and 144, when the remote unit s/n 174 would constantly jump 8 to 10 meters. Data for these days were carefully checked and appropriate T & C corrections were made to the edited master. 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 1.25 and 3.26 meters. Calibration distances varied from 1410 to 2274 meters.

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

<u>Signal No.</u>	<u>Del Norte Remotes-S/N</u>	<u>Julian Days Used</u>
108	174	071, 144
108	249	107, 108
108	252	102
110	174	061, 143
110	249	109, 122, 123, 124, 130
130	174	053, 143
130	252	039

<u>DMU-S/N</u>	<u>Del Norte Master-S/N</u>	<u>Julian Days Used</u>
432	162	039, 053, 061, 071
189	199	102, 107, 108, 109, 122, 123, 124, 130, 143, 144

H. SHORELINE

Shoreline and topographic details were transferred from the Class I manuscripts TP-00199, 00200, and 00202. Shoreline details were verified by field edit in December, 1978, by Photo Party 61, Coastal Mapping Division, Atlantic Marine Center. No changes in shoreline were noted by the hydrographer. TP-00197 see Verifiers Report

Class I's
checked
TP-00197
00200
00199
00202

I. CROSSLINES

Crosslines totaled 9.14 nautical miles or 11.0% of the main scheme soundings. All crosslines compared to the main scheme agreed to within one foot.

J. JUNCTIONS

As per PROJECT INSTRUCTIONS, junctions were made with Survey H-9800 (HSB-5-2-78), scale 1:5,000 (1978-79), Survey H-9801 (HSB-5-3-78), scale 1:5,000 (1979), and the prior survey H-8106, scale 1:10,000 (1954-55). All junction soundings between this survey and the two contemporary surveys H-9800 and H-9801, agreed to within one foot. Comparing the present survey H-9806 with that of the prior survey H-8106 showed a general agreement to within three feet. See Verifiers Report

K. COMPARISON WITH PRIOR SURVEYS

Comparisons were made with the prior surveys H-5754, North River to Jackson Creek, June 1934, Feb. 1935, scale 1:10,000; and H-8106, St. Marys Entrance - Cumberland Sound, Jan. 1954-Feb. 1955, scale 1:10,000.

The prior survey, H-5754, when compared to the present survey, showed general agreement to within four feet, except in the following cases: see Verifiers Report

<u>H-5754</u>	<u>H-9806</u>	<u>Latitude</u>	<u>Longitude</u>
2	12	30°44.47'	81°29.11'
19	12	30°44.58'	81°29.21'
4	13	30°44.43'	81°29.13'
20	26	30°43.46'	81°29.14'
17	25	30°43.42'	81°29.15'
35	17	30°43.38'	81°29.20'
30	37	30°43.26'	81°29.25'
20	32	30°43.29'	81°29.06'
31	39	30°43.12'	81°29.05'

Agreement was also generally found between the soundings of H-8106 and the present survey. A general difference of approximately three feet was found, with the following exceptions:

<u>H-8106</u>	<u>H-9806</u>	<u>Latitude</u>	<u>Longitude</u>
15	23	30°43.48'	81°29.17'
14	22	30°43.49'	81°29.24'
13	20	30°43.36'	81°29.18'
31	38	30°43.27'	81°29.28'

The presurvey review items within the limits of this survey were investigated, with the following results:

COMPILER NOTE:

*(COAST PILOT REPORT)
FROM C.L. 324 (1963)*

#2 - 2-foot shoaling reported 1963, charted at 30°43.62', 81°28.66'. This area was developed using 25 meter spaced sounding lines, (pos. 778-791, 976-804), plus a sounding line across the mouth of Beach Creek (1509-1510). A channel with a least depth of 4⁵ feet was found, coming out of the creek. However, it should be noted that the shoal north of the creek, does extend southward to 30°43'39", 81°28'40", which has a depth of two feet. It is recommended that the 2-foot sounding in the river channel be deleted, and that this northern shoal be added. *concur*

*CHART
AREA AS
SHOWN ON
THE PRE-
SENT SURVEY
JPS*

#3 - Platforms, PA, charted in Lat. 30°42.94', Long. 81°29.10' and Lat. 30°42.71', Long. 81°28.95'. When this area was searched, there were no indications that any platforms existed nor had ever existed. According to the presurvey review, the

origins of these platforms came from the chart letter 1015 of 1976. Reviewing this letter reveals that the platforms were originally plotted on the chart in the wrong location, the bearing that was given was 275° from the location of buoy #17 at that time, not 293°. On June 3, 1979, Mr. Houston White, the man responsible for the original letter, verified to field party personnel that the platforms he wrote about in chart letter 1015 of 1976 were the old Tiger Island range lights; in other words, those located in PSR #5. Mr. White accompanied the Officer-in-Charge of Launch 1278 out to the field location and visually verified these platforms. For further information on the description of the platforms, refer to PSR #5 in this report and Section K, Comparison to Prior Surveys, Descriptive Report, OPR-G324, HSB-5-2-78 (H-9800). *concur*

Bearing using a buoy can be very approximate! 7PS

- #4 - Marker, charted at Lat. 30°42.45', Long. 81°28.66', was verified on JD 144, pos. 1600, as a cement dolphin marker approximately 20-25 feet tall. Retention of this marker at 30°42'28"N, 81°28'39"W is recommended. *concur 7PS*
- #5 - Submerged piles, charted in Lat. 30°42.25', Long. 81°28.66'42". According to the presurvey review, this was the remains of the rear Tiger Island range light (Survey H-8106). It was discovered that the "submerged piles" do not exist; however, in this place stands the old Tiger Island rear range "platform." Position number 1566 (JD 144), is the location of the cement platform (13 feet square, 9.3 feet high) at 30°42'15" N, 81°28'40" W, which was the same as on the prior surveys H-5754 and H-8106, and the location of the platform marked on the Class I manuscript TP-00202. It is recommended the description "submerged piles" be deleted, and "platform" be added to the chart for this item. (This is the platform described in PSR #3). *concur* The other platform located at lat 30°42'17" Long. 81°28'16" was added to survey from topographic sources. *concur 7PS*

L. COMPARISON WITH THE CHART

This survey was compared with NOAA Chart 11503 (29th Edition, July 9, 1977), scale 1:20,000. Soundings between the chart and the present survey agreed to within three feet of each other, 60% of the time. Those soundings which did not follow this trend are too numerous to list. In general, those soundings which were different, show that the charted soundings were shoaler than those obtained by this survey. It is recommended that the present survey's soundings supersede those of the chart in all cases. *concur-7PS*

A marker located on this survey at 30°42'23"^{24.15}, 81°28'44"^{38.99} (pos. #1599) which was not charted, but appears on the Class I shoreline manuscript TP-00202 was verified by Launch 1277. It is recommended that this marker, an 18" diameter wood pile with a height of 35 feet be charted. *concur*

as shown on the present survey. 7PS

Three Rocks, ^{awash from T-5754(1934-35) in the vicinity of} charted on 11503 at Lat. 30°44'46", 81°28'42", Do not and 30°44'42", 81°28'44", were not found; however due to the *concur*, height of the tide and water visibility of only a few inches, *See Q.C.*, these could have been missed. This area does not lay within *comments* the navigable area of this survey. It is recommended that *on page 3* these rocks remain on the chart. *These rocks were apparently charted from prior survey of the Verifier's Report*
H-5754(1934-35) These were described as oyster rocks on the prior survey. Concur.

Big Marsh Island, charted at 30°44'54" to 30°44'59" and *Items 6a+b* Long. 81°29'07" no longer exists as an island, but is now a shoal. This area was developed with 25 meter sounding lines, obtaining a least depth of 67 feet (insert between the first and second soundings out of pos. #1461). The shoal runs in a northern direction from 30°44'25" to 30°45'02" at Long. 81°29'09". It is recommended that Big Marsh Island be deleted from the chart and the shoal be shown in its place. *concur.*

Due to the dredging of the channel, several Corps of Engineer dredge markers are now located in the northern part of this survey. These markers are either 2" by 2" wooden stakes or 2" steel pipes. There are too many to list by positions; however, the general vicinities are from 30°44'-48" to 30°45'11" at 81°29'18" and from 30°45'15" to 30°45'23" at 81°28'56". According to Corps of Engineers personnel at the Jacksonville District Office, these stakes are to remain for maintenance dredging; thus, it is recommended that they be charted. *concur. These stakes do not appear on the Junctional survey H-9801(1978). It is possible these dredging ranges were added after H-9801(1978) was completed. Transferred to H-9801 during Q.C.I.*

M. ADEQUACY OF SURVEY

HSB-5-1-79 (H-9806) is a thorough navigable area 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.

N. AIDS TO NAVIGATION

Comparison of the Aids to Navigation, at the completion of this survey, to the Light List, Vol. II, 1979, showed several discrepancies. Due to the widening of the channel and the establishment of the Kings Bay Naval Base, the number of buoys have increased from 3 to 6. The buoys #15, 16 and 17 were moved further east along the channel, beyond the limits of this survey. The following are the geographic positions of newly established buoys within the area covered by this survey:

<u>BUOY</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>
R "26"	30°43'02".03	81°28'26"25.61" (pos #1508)
B "27"	30°43'01".23	81°28'35"42 (pos #1507)
R "28"	30°43'15".41	81°28'46"45.50" (pos #1506)
R "30"	30°43'28".05	81°28'57"56.69" (pos #1505)
B "31"	30°43'57".16	81°29'10"9.88" (pos #1504)
R "32"	30°44'00".46	81°29'05"04.89" (pos #1503)

The Cumberland Sound Channel Light #19, ^{not shown on smooth sheet} located at 30°44'42.6"N, 81°29'06.8"W, ^{at 10020°} was removed. A new light was established in this area, Cumberland Sound Channel Light #33 at 30°44'43.23"N, 81°29'06.23"W (pos. 1511, JD 143). After all hydrography was completed, the Range "B" Front and Rear Lights were removed from their charted location (Chart 11503) and will be re-established at new geodetic positions by the Coast Guard. The St. Marys River Light #2, Cumberland Sound Range "A" Front and Rear Lights; and the St. Marys Entrance Rear Range Light have remained the same as charted on NOAA Chart 11503 and as described in the Light List. ** Rear Lt. off survey limits* It is recommended that locations and descriptions of the new buoys and fixed lights be obtained from the Coast Guard, Aids to Navigation Section, Seventh Coast Guard District, Miami, Florida, since they were being changed during the times of operations. *concur*

Due to dredging operations coinciding with hydrography, it was not possible for the hydrographer to ascertain whether or not the aids adequately marked the channel. *they in fact do.*

For further information, refer to NOAA Forms 76-40, Landmarks for Charts, included in the separates following the text. No other aids are recommended by the hydrographer.

O. STATISTICS

NOAA Launch 1277 was the only vessel used on this survey, which obtained 101.2 nautical miles of sounding lines, covering 2.5 square nautical miles with 1703 positions and 38 bottom samples. Refer to the Abstract of Positions in the separates following the text for further information concerning statistics.

P. MISCELLANEOUS

Sand waves were noticed on the fathogram on a couple of days: JD 071, positions 462 (4th sounding out of the fix) to 2nd sounding out of #463; position 473 to 2nd out of #474; position #488 to 2nd sounding out of #490; JD 124, from positions 1238 to 1287; and JD 130, positions 1324 to 1325.

It should also be noted that during the time 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.

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

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, 4th Edition, and the AMC Manual. Sounding and position data were obtained by the hydroplot/hydrolog system utilizing computer programs RK111 and FA181.

At the beginning of this survey, an "on-line" range/azimuth program was not available to the field party; hence, the real time range-range plot program (RK111) was used to log all the data except the azimuth. The azimuths were recorded in books and later all tapes were edited using RK602 into the correct format along with the angles added. On JD 122, 1979, and after, the real time range-azimuth hydrolog program (FA181) was used to log all data. This new program still has several bugs which creates different format errors in the raw master tapes. One problem is that the TTY#2 will be printing out a long word on the "on-line" printout, when it suddenly stops, without completing the long word, nor will it "return" and "line feed" and will end up running a couple of lines of data together. Also, the program will duplicate data either on the same line or record a copy of a long word. These format errors that show up on the "on-line" printout are not necessarily the same ones that are on the "raw master tapes." To eliminate possible confusion, a copy of the "Raw master tape" printout, along with a copy of the edited master tape printout and the "on-line" data printout are all submitted. Due to the format errors, it was difficult to scan the fathogram off any other printout except the "edited" master printout; thus all depth corrections, plus peaks and deeps will be found on this printout for days JD 122 and later.

Due to problems with the plotting programs RK212 and RK216 when smooth plotting the final field sheet, a velocity tape was not used when plotting soundings. Refer to Section R, Automated Data Processing, Descriptive Report, OPR-G324, HSB-5-2-78 (H-9800), for further information concerning this matter.

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 and deeps. Time and course corrections for Del Norte busts were edited onto the master tape.

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
FA181	Range-Azimuth Hydrolog	2/23/78
RK201	Grid, Signal & Lattice Plot	4/18/75
RK212	Visual Station Table Load	4/01/74
RK216	Range/azimuth Non-Real Time Plot	2/05/76
RK300	Utility	2/05/76
RK330	Reformat & Data Check	5/04/76
RK407	Geodetic Direct/Inverse	10/23/75
AM500	Predicted Tide Generator	11/10/72
RK602	Elinore	5/21/75

S. REFERENCE TO REPORTS

Signal Report, CM-7804, Kings Bay to St. Marys Entrance, Georgia, 1978.

Descriptive Report, OPR-G324, HSB-5-2-78 (H-9800), St. Marys Entrance, Georgia/Florida, 1979.

Descriptive Report, OPR-G324, HSB-5-3-78 (H-9801), Mill Creek to Stafford Island, Georgia/Florida, 1979.

Respectfully submitted,

Robert Lewis

Kathryn Andreen
LT, NOAA

FIELD TIDE NOTE
OPR-G324

Field tide reduction of soundings was based on predicted tides for St. Mary's 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. Mary's Ent. 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 - Sea- camp Dock #867-9758	30° 45.6'N 81° 28.3'W	11-3-78 End of Survey
* Bubbler gage		
** ADR gage		

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 work and the additional length of exposed tubing involved in relocating the orifice, it was decided to leave it in its original location and not to run hydro during negative tides. (However, bottom samples and detached positions on bouys were taken during a negative tide - J.D.087). 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 was 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 unseasonable high winds and tides. Only part of the December tide record was salvageable, (December 1st thru December 13th). 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.) The following are days when the bubbler tubing from the orifice to the gage was found broken and later repaired:

Broken - March 1, 1979	Repaired - March 6, 1979
March 28, 1979	March 30, 1979
May 8, 1979	May 9, 1979
May 21, 1979	May 21, 1979

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/gage comparison, 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/gage comparisons also occurred with the other Leupold Stevens ADR at Range "A" gage. 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 10 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 later EDT) and all records were sent to the Tides and Water Levels Branch, Rockville. All gages were leveled at the time of installation and releved 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. Androen
 OIC, Hydrographic Field Party #2

Subject: Request for Tide Data

Please furnish tide data to A.C. Processing Division for Surveys HSB-5-2-79, (H-9800) and HSB-5-1-79, Project CIR-G324-MT-28.

See enclosed field tide note and chartlet for gages operated.

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

H-9800, HSB-5-2-78

<u>J.D. 1978</u>	<u>Hydro Levings (GMT)</u>	<u>Hydro Leads (GMT)</u>	<u>Area of Ocean</u>
320	1400	2100	81/25/45 to 81/26/15W
321	1400	2200	81/25/45 to 81/26/45W
322	1400	2300	81/25/30 to 81/26/15W
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	81/24/30 to 81/25/55W
043	1300	1900	81/24/15 to 81/24/45W
044	1300	2100	81/24/00 to 81/25/00W
045	1300	2200	81/24/25 to 81/25/15W
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	30/45/03 to 30/45/45W 81/29/03 to 81/29/30W
053	1300	2200	30/42/48 to 30/43/45W 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-G324-HFP-78. (H-9806)

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

HSB-5-1-79, H-9806

<u>J.D. 1979</u>	<u>Hydro Begins (GMT)</u>	<u>Hydro Ends (GMT)</u>	<u>Area of Hydro</u>
061	1400	2200	30/44/00 to 30/44/30 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 (JD079)	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

May 7, 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-5-2-78 (H-9800), and HSB-5-1-79 (H-9806), Project OPR-G324-HFP-78.

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

<u>HSB-5-2-78</u> <u>J.D. 1979</u>	<u>Hydro Begins (GMT)</u>	<u>Hydro Ends (GMT)</u>	<u>Area of Hydro</u>
101	1300	2100	30/42/06 to 30/43/00 N 81/24/08 to 81/28/23 W
120	1300	2200	30/41/10 to 30/43/00 N 81/24/08 to 81/28/23 W
<u>HSB-5-1-79</u> <u>J.D. 1979</u>			
102	1500	2300	30/42/26 to 30/43/38 N 81/28/17 to 81/29/20 W
107	1400	2300	30/42/46 to 30/43/15 N 81/28/14 to 81/29/11 W
108	1400	2300	30/42/18 to 30/43/38 N 81/28/20 to 81/28/54 W
109	1300	1900	30/43/54 to 30/44/05 N 81/28/56 to 81/29/38 W





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

June 8, 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-5-2-78, (H-9800), and HSB-5-1-79 (H-9806), Project OPR-G324-HFP-78.

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

HSB-5-2-78 (H-9800)

<u>J.D. 1979</u>	<u>Hydro Begins (GMT)</u>	<u>Hydro Ends (GMT)</u>	<u>Area of Hydro</u>
131	1200	2100	30/42/26 to 30/43/01 N 81/24/07 to 81/27/02 W
135	1300	1900	30/42/32 to 30/42/49 N 81/24/56 to 81/25/17 W
141	1600	2400	30/42/02 to 30/42/58 N 81/24/37 to 81/27/07 W
142	1100	2200	30/42/05 to 30/43/09 N 81/25/19 to 81/28/17 W
155*	1200	1700	30/41/57 N 81/28/08 W

HSB-5-1-79 (H-9806)

J.D. 1979

122	1300	2100	30/44/44 to 30/45/06 N 81/28/46 to 81/29/41 W
123	1300	2200	30/43/39 to 30/44/43 N 81/28/46 to 81/29/47 W
124	1300	2100	30/42/52 to 30/45/09 N 81/29/18 to 81/29/33 W
130	1200	2200	30/42/39 to 30/45/23 N 81/28/51 to 81/29/37 W
143	1100	2200	30/43/05 to 30/44/55 N 81/28/38 to 81/29/37 W
144	1100	1900	30/42/02 to 30/43/10 N 81/28/12 to 81/29/07 W

*D.P. Sounding



H-9806

GEOGRAPHIC NAMES

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				
CUMBERLAND SOUND												1
CUMBERLAND ISLAND												2
ST. MARYS RIVER												3
TIGER ISLAND												4
LITTLE TIGER ISLAND												5
Jolly River												6
mill creek												7
Beach Creek												8
Tiger Creek												9
POINT PETER												10
POINT PETER CREEK												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25

Approved:

Chas. E. Harrington

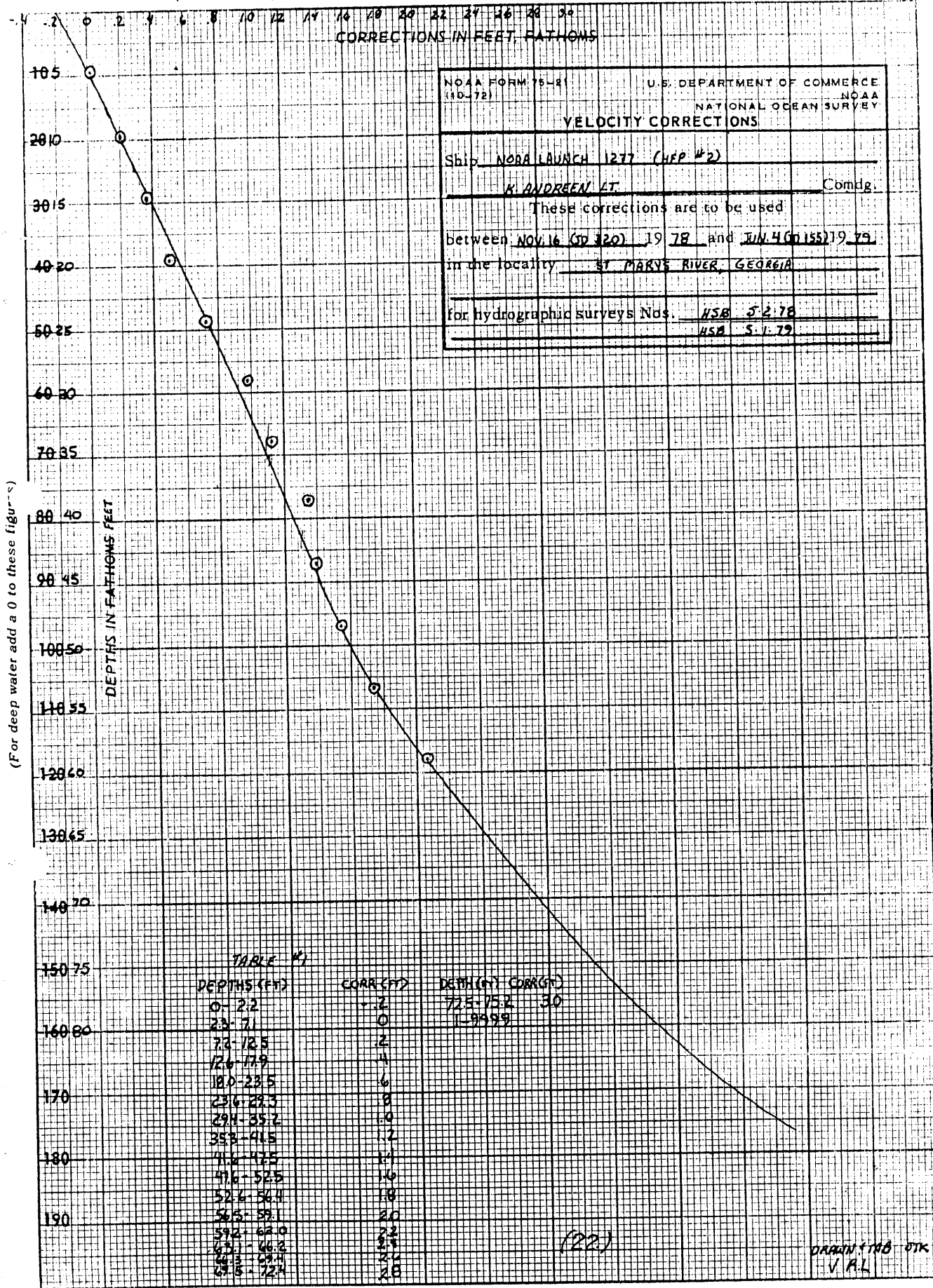
Chief Geographer - C3x5

14 MAY 1980

(20.)

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

Table #1



NOAA FORM 75-LR (10-72) U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEAN SURVEY

VELOCITY CORRECTIONS

Ship NOVA LAUNCH 1277 (HEP #2)

R. ANDRESEN LT. Comdg.

These corrections are to be used between NOV. 16 (SD 320) 19 78 and JUN. 4 (0155) 19 79 in the locality ST. MARKS RIVER, GEORGIA

for hydrographic surveys Nos. HSB 5-2-78
HSB 5-1-79

(For deep water add a 0 to these figures)

TABLE #1

DEPTH (FT)	CORR (FT)	DEPTH (FT) CORR (FT)
0-2.2	-1.6	725-152 30
2.3-7.1	0	119999
7.2-12.5	2	
12.6-17.9	4	
18.0-23.5	6	
23.6-29.3	8	
29.4-35.2	10	
35.3-41.5	12	
41.6-47.5	14	
47.6-52.5	16	
52.6-56.1	18	
56.2-59.1	20	
59.2-62.0	22	
62.1-66.2	24	
66.3-69.1	26	
69.2-72.4	28	

(22)

DRAWN BY TAB OTK
V.R.L.

VELOCITY TABLE #1

OPR G-324

H-9806

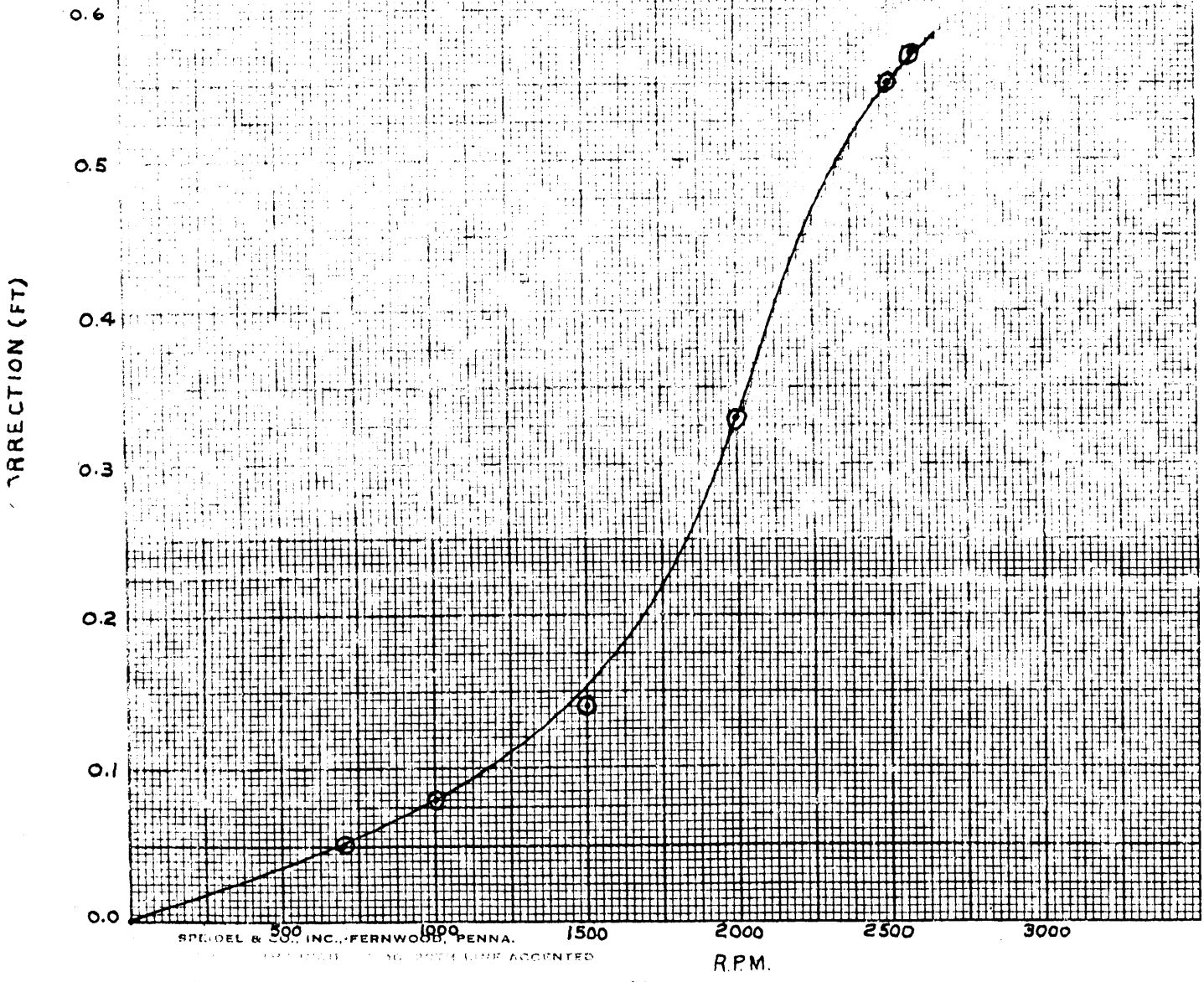
HSB 5-1-79

000022 1 0002 0001 000 127700 009806
000071 0 0000
000125 0 0002
000179 0 0004
000235 0 0006
000293 0 0008
000352 0 0010
000415 0 0012
000475 0 0014
000525 0 0016
000564 0 0018
000591 0 0020
000630 0 0022
000662 0 0024
000694 0 0026
000724 0 0028
000752 0 0030
999999 0 0030

SETTLEMENT & SQUAT
LAUNCH 1277
NOV. 14, 1978

ABSTRACT

<u>RPM</u>	<u>CORRECTION (FT)</u>
0-1170	0.0
1171-1940	0.2
1941-2530	0.4
2531-2575	0.6



SPRUELL & CO., INC., FERNWOOD, PENNA.

R.P.M.

SIGNAL LISTING

OPR G-324

HSB 5-1-79

H-9806

108	3	30	41	56801	081	28	34063	250	0000	000000	Tig (USE), 1954
110	3	30	43	07729	081	29	27531	250	0000	000000	Jol (USE), 1954
118	3	30	42	24557	081	29	06920	139	0000	000000	St. Marys Ent. Rear Range Lt., 1978
122	3	30	44	20591	081	29	13638	139	0000	000000	Cumberland Sound Range "B" Front Lt., 1978
*126	5	30	42	27023	081	27	54272	250	0000	000000	St. Marys Ent. Front Range Lt., 1979
+127	2	30	42	27083	081	27	54206	250	0000	000000	St. Marys Ent. Front Range Lt., 1979
130	3	30	43	34260	081	29	53562	250	0000	000000	Cumberland Sound Range "A" Front Range Lt., 1978

Station located by Photo Party 61

Station located by Hydro Field Party #2

All other stations located or verified by Photo Party 62

Richards

NOAA FORM 76-40 (8-74)		U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION			ORIGINATING ACTIVITY	
Replaces C&GS Form 567.		FOR CHARTS			<input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)	
NONFLOATING AIDS		STATE	LOCALITY	DATE		
REPORTING UNIT (If field party, ship or office)		Georgia	Kings Bay to St. Marys Entrance	Mar. 1979		
COASTAL MAPPING DIV. A.M.C. NORFOLK, VA.		The following objects HAVE <input checked="" type="checkbox"/> BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS. OPR PROJECT NO. G324				
JOB NUMBER		SURVEY NUMBER	DATUM	METHOD AND DATE OF LOCATION (See instructions on reverse side)		
CM-7804		TP-00197	N.A. 1927	OFFICE		
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION		FIELD	CHARTS AFFECTED	
		LATITUDE	LONGITUDE			
LIGHT	Cumberland Sound Range B Rear Light <i>MARL - 5-23-79 KA</i> <i>New Position Not Obtained.</i>	30 44	81 29	F-3-6-L July, 1978	11503	

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"/> GEODETIC 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	R. Kravitz	OFFICE ACTIVITY REPRESENTATIVE
		<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

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.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

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

Richards

NOAA FORM 76-40 (8-74) Replaces C&GS Form 367.		U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION			ORIGINATING ACTIVITY						
NONFLOATING AIDS		FOR CHARTS									
REPORTING UNIT (Field Party, Ship or Office) Coastal Mapping Div. A.M.C. Norfolk, Va.		STATE Georgia Florida		LOCALITY Kings Bay to St. Marys Entrance		DATE Mar. 1979					
OPR PROJECT NO. G324		JOB NUMBER CM-7804		SURVEY NUMBER TP-00199		DATUM N.A. 1927					
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	LATITUDE		LONGITUDE		METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED			
		D.M. Meters	D.P. Meters	D.M. Meters	D.P. Meters	OFFICE	FIELD				
LIGHT	ST. Marys River Light 2	30 43	40.6529	81 29	25.1634	78E(P) 8295 Mar. 23, 1978	F-3-6-L July, 1978	11503			
LIGHT	Cumberland Sound Range A Front Light	30 43	34.2601	81 29	53.5624	78E(P) 8295 Mar. 23, 1978	F-3-6-L July, 1978	11503			
LIGHT	* Cumberland Sound Range A Rear Light	30 43	53.0198	81 30	41.6814	78E(P) 8295 Mar. 23, 1978	F-3-6-L July, 1978	11503			
	* Not in the limits of this survey.										

L-259(19)

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"/> GEODETIC 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	C. Blood	OFFICE ACTIVITY REPRESENTATIVE
		<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

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.

FIELD (Cont'd)

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

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec. 8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis. 8-12-75

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

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

Replaces C&GS Form 567.

<input checked="" type="checkbox"/> TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input type="checkbox"/> TO BE DELETED	REPORTING UNIT (If Field Party, Ship or Office) Hydrographic Field Party #2	LOCALITY Cumberland Sound
STATE Georgia		DATE June 1979

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

CHARTING NAME	JOB NUMBER	SURVEY NUMBER	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		OFFICE	FIELD	
				° /	' /	° /	' /			
LIGHT	G324	HSB-5-1-79	Cumberland Sound Channel Light #33	30	44	81	29	F-L** 5-23-79	11503	
								**Located by Range/Azimuth Method using a Del Norte remote and Wild T-2		

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Kathy Andreen
POSITIONS DETERMINED AND/OR VERIFIED	Kathy Andreen
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' <i>(Consult Photogrammetric Instructions No. 64.)</i>	
OFFICE I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	FIELD (Cont'd) B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982
FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field 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
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.	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	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	Kathy Andreen
POSITIONS DETERMINED AND/OR VERIFIED	Kathy Andreen
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>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>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>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>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p>

APPROVAL SHEET
SURVEY H-9806 (HSB-5-1-79)

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

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

Approved and forwarded,



THOMAS W. RICHARDS

Lt. Cdr., NOAA

Chief, Hydrographic Surveys Branch

September 20, 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
867-9909 Range A Lt. Tower, GA

Period: May 2 -24, 1979

HYDROGRAPHIC SHEET: H-9806

OPR: G324

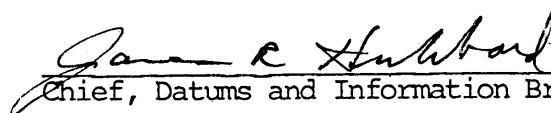
Locality: St. Marys River, Georgia - Florida

Plane of reference (mean ~~lower~~ low water): 1 1.16 ft. - Platform
2 1.44 ft. - Range A Lt. Tower

Height of Mean High Water above Plane of Reference is
6.0 ft. - Platform; 6.1 ft. - Range A Lt. Tower

REMARKS: Recommended zoning:

- (1). South of $30^{\circ}43.1'$ zone direct on Platform.
- (2). North of $30^{\circ}43.1'$ zone direct on Range A Lt. Tower.


Chief, Datums and Information Branch

M



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

August 30, 1979

OA/C3421:ELR

TO: OA/C3222 - James W. Dailey
FROM: OA/C342 - John D. Perrow, Jr.
SUBJECT: Cancellation of Blue Print Numbers Assigned to
Twelve Class I Maps in Job CM-7804, Kings Bay
to St. Marys Entrance, Georgia-Florida

Blue Print numbers BP-107091 through BP-107102 should be canceled from all Nautical Chart Branch STANDARDS. These Blue Print numbers are assigned to Class I Maps, TP-00193 through TP-00203, in Job CM-7804. The maps have not and will not be used to update NOS nautical charts within the area. The maps are labeled VOID and will be filed in the Nautical Data Section for reference purposed only. The original Class III Maps will be revised to depict the extensive dredging work done after the maps were compiled.

New photography will be flown in October 1979 and all 12 maps, TP-00193 through TP-00203, will be revised. The new revision will be field edited and registered in the Bureau Archives as Final Field Edited Maps.

Upon completion of each phase of compilation, Class I and Final Map copies will be furnished the Nautical Data Section for assignment of new Blue Print numbers.

cc:

C342
C3421
CAM52
CAM521



APPROVAL SHEET
FOR
SURVEY H-9806

- 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: 2/22/80

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		400	
DESCRIPTIVE REPORT		1	SMOOTH OVERLAYS: POS. ARC, EXCESS		3	
DESCRIP-TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						1-misc.data
CAHIERS	1- with printouts					
VOLUMES	1					
BOXES			1- Smooth			

T-SHEET PRINTS (List)

SPECIAL REPORTS (List) 1- Chrt. mark-up

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			1741
POSITIONS CHECKED		15	
POSITIONS REVISED		5	
SOUNDINGS REVISED		30	
SOUNDINGS ERRONEOUSLY SPACED		-	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		-	
	TIME - HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	22		
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS		28	
VERIFICATION OF SOUNDINGS		50	
COMPILATION OF SMOOTH SHEET		30	
APPLICATION OF TOPOGRAPHY		18	
APPLICATION OF PHOTOBATHYMETRY			
JUNCTIONS		4	
COMPARISON WITH PRIOR SURVEYS & CHARTS		18	
VERIFIER'S REPORT		8	
OTHER			
TOTALS	22	156	178

Pre-Verification by M. Hickson	Beginning Date 08/09/79	Ending Date 10/09/79
Verification by S. Kelley, F. Lamison, L. Cram	Beginning Date 09/01/79	Ending Date 01/30/80
Verification Check by Harry R. Smith	Time (Hours) 6	Date 02/05/80
Marine Center Inspection by Hydrographic Inspection Team (AMC)	Time (Hours) 8	Date 02/19/80
Quality Control Inspection by F. P. Saulsbury	Time (Hours) 54	Date 4-21-80
Requirements Evaluation by J. B. ...	Time (Hours) 2	Date 7/16/80

H. Myers thru 5/13/80

REGISTRY NO. H-9806

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. _____

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

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

MAGNETIC TAPE CORRECTED

DATE _____ TIME REQUIRED _____ INITIALS _____

REMARKS:

ATLANTIC MARINE CENTER
VERIFIERS REPORT

REGISTRY NO. H-9806

FIELD NO. HSB-5-1-79

Georgia, Cumberland Sound, Tiger Creek to Mill Creek

SURVEYED: February 8 through May 24, 1979

SCALE: 1:5,000

PROJECT NO. OPR-G324

SOUNDINGS: DE-723D Fathometer,
Sounding Pole

CONTROL: Range-Azimuth
(Del Norte and Theodolite)

Chief of Party	J. W. Richards
Surveyed by	K. Andreen
Automated Plot By	Xynetics 1201 Plotter (AMC)
Verified and Inked by	L. G. Cram
	30 Jan 1979 80

1. INTRODUCTION

- a. One unusual problem was encountered; the use of Class III maps to depict the shoreline on this survey as per letter of August 30, 1979 (appended to back of Descriptive Report).
- b. Some notes and changes were made in the Descriptive Report by the verifier during verification.

2. CONTROL AND SHORELINE

- a. The source of control is adequately described in Sections F and G of the Descriptive Report.
- b. Shoreline for this survey was transferred from Class III manuscripts TP-00197, TP-00199, TP-00200, TP-00202, as per letter dated August 30, 1979.

1. Cumberland Sound Range B Rear Range Light appeared on Class III manuscripts. The field stated that this light was moved after hydrography was completed. The field did not obtain a location for this aid. Recommend the present location of this aid be determined and added to the survey ~~by the Quality Control Branch in Rockville~~ *by compilation.*

2. The Marsh Islands located in the vicinity of Lat. 30°44'15", Long. 81°29'37" appear quite different. They appear to have increased in size in varying amounts up to 200 meters. This could be the result of spoil dumping by the Corps of Engineers dredging projects in the area.

Do not concur. These marsh islands have decreased in size, in both length & width. Approx 50 meters lengthwise & 50 meters widthwise.

FPS

3. Cumberland Sound Channel Light 79 located at approximate Lat. $30^{\circ}44'30''$, Long. $81^{\circ}29'12''$ is on Class III manuscripts but was not addressed by the hydrographer. The light was removed by the field editor manuscript because *concur* the U.S. Coast Guard removed the aid. Recommend deleting this item from the chart.

3. HYDROGRAPHY

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

b. The standard depth curves were drawn in their entirety with the exception of small proportions of the zero curve. Some dashed curves were added for further delineation of the bottom configuration, *also a few supplemental curves were added.*

c. This survey is considered adequate to delineate the basic bottom configuration and least depths in the area prescribed by the project instructions. *concur*

4. CONDITION OF SURVEY

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

a. The sounding volumes are incomplete in regards to general notes and other useful information.

b. The field failed to locate some aids (St. Marys River Lt. #2) and a platform located in Lat. $30^{\circ}42'18''$, Long. $81^{\circ}28'17''$. These items were transferred from topographic sources, *Platform was located with a detached position on junctional survey H-9800 (1978-79)*

c. The geographic names form and the non-floating aids form were incomplete and conflicted with other statements in the text of the Descriptive Report.

5. JUNCTIONS

Adequate junctions were made with the following surveys:

H-9800 (1978) to the south *o.k.*
H-9801 (1978) to the north *o.k.*

These junctions are complete and require no further work by Quality Control. A junction was attempted with H-8106 (1954-55) as required by the Project Instructions. It was found that this area has undergone fairly extensive change and no junction was made. The present survey soundings are in agreement with the charted information. *Do not concur with 1st sentence. Curves were revised for coincidence of several items were transferred where necessary.*

It was noted that the steel pipes and wooden stakes located in the junctional area of this survey with H-9801 (1978) do not appear on H-9801 (1978). *ary.* These items were described as dredging ranges and it is a good possibility that *7PS*

these ranges did not exist at the time the hydrography was done on H-9801 (1978). *Hydrographer states that these markers are permanent. Markers were transferred to H-9801 during R.C.I. 7PS*

6. COMPARISON WITH PRIOR SURVEYS

H-8106 (1954-55) 1:10,000

H-5754 (1934-35) 1:10,000

These are the most recent prior surveys in this area that provide complete coverage.

In general, the present survey is anywhere from 20 feet deeper to 11 feet shallower than the prior surveys. The deeper depths appear to occur in the area of the dredged channel areas. This area has undergone fairly extensive changes as evidenced by the changes in shoreline which varies from the prior surveys by as much as 200 meters in places, with the complete submergence of the feature called Big Marsh Island. The bottom configuration and general depths appear to have undergone fairly extensive changes. It is possible to attribute some of the differences to natural causes and to a greater degree the dredging that has occurred in the Kings Bay Approach Channel.

The present survey is adequate to supersede the prior surveys within the common area with the following exceptions:

a. There are three rocks awash charted in the vicinity of Lat. $30^{\circ}44'45''$, Long. $81^{\circ}28'44''$. These rocks were charted from prior survey H-5754 (1934-35). These rocks ~~appear to~~ fall in the area of the present survey that has depths of from 10 feet to 17 feet of water. The field did not investigate these rocks and it is recommended that these rocks be ^{expunged from the} retained as charted. *These were oyster bars and are considered discredited by the present survey. 7PS*

b. The reef symbol charted in the vicinity of Lat. $30^{\circ}44'31''$, Long. $81^{\circ}28'51''$ ~~appears to~~ originates with H-5724 (1934-35) and is described as an oyster reef. The present survey failed to investigate this item ~~but it appears to~~ fall in an area covered by from 3 to 11 feet of water. ~~Recommend retaining this item as charted.~~ *Oyster reef considered discredited by present survey. Recommend charting areas a & b, as shown on the present survey. 7PS*

7. COMPARISON WITH CHART NUMBER 11503 (29th EDITION JULY 9, 1977)

a. Hydrography

Most of the charted hydrography (97%) originates with the previously discussed prior surveys. The remaining soundings originate with a source not readily ascertainable at the time of verification, but possibly originate with U.S. Army Corps of Engineers surveys. The U.S. Army Corps of Engineers has done extensive dredging in the channel areas of this survey. The after dredging blue prints of the U.S. Army Corps of Engineers were compared with the present survey in the channel area and the agreement was excellent (0-1 foot).

The present survey is adequate to supersede the charted information when consideration is given to the items mentioned in Section Six of this report and the U.S. Army Corps of Engineers dredging surveys in the channel areas.

b. Controlling Depths

The charted depth notes are from 9 to 11 feet shoaler than these areas on the present survey. This change reflects the dredging done on the Kings Bay Entrance Channel. *Chart controlling depths from C of E, after dredging surveys.*

c. Aids to Navigation

The aids as located on the present survey adequately mark their intended features. As some of the aids were in the process of being moved at the end of hydrography on this survey, the position of all aids should be checked ~~as recommended under Section N of the Descriptive Report.~~ *with the Coast Guard*

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the Project Instructions.

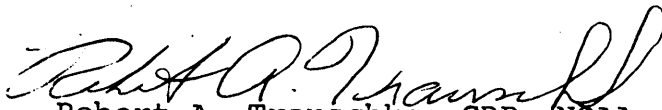
9. ADDITIONAL FIELD WORK

This is an excellent Navigable Area Survey. ^{*concur*} The only additional work recommended is that necessary to resolve the differences as stated in Sections ~~6, a, b,~~ and 2 b of this report. *(new topo needed)*

Inspection Report
H- 9806

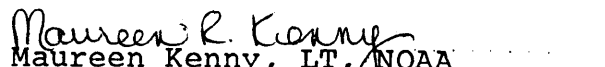
Any verification errors regarding procedures and presentation of survey data detected during inspection by the Hydrographic Inspection Team have been corrected before submission for administrative approval. HIT comments regarding quality of field work, compliance with instructions, and adequacy of the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


Examined and Approved:
Hydrographic Inspection Team
Date:


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


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

ABSENT
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


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



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

OA/C352:FPS

April 21, 1980

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

THRU: Chief, Quality Control Branch *grw*

FROM: F. P. Saulsbury *F. P. Saulsbury*
Quality Evaluator

SUBJECT: Quality Control Report for H-9806 (1979), Georgia/Florida,
Cumberland Sound, Tiger Creek to Mill Creek

A quality control inspection of H-9806 was accomplished to monitor the survey for obvious deficiencies with respect to data acquisition, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, shoreline transfer, smooth plotting, decisions and actions taken by the verifier, and the cartographic presentation of data. In general, it was found to conform to the National Ocean Survey's standards and requirements except as stated in the Verifier's Report and as follows:

1. Revisions and additions to survey information on the smooth sheet accomplished during quality control inspection are shown on the one-half scale survey copy furnished to verification.
2. Marsh shoreline areas, generally not defined on the present survey, may be acquired from the contemporary topographic surveys.
3. The pipeline in latitude 30°44.36'N, longitude 81°28.90'W and the visible wreck in latitude 30°43.83'N, longitude 81°28.82'W, on the present survey, originate with field edit information.
4. The positions of the markers in latitude 30°42.41'N, longitude 81°28.65'W and latitude 30°42.45'N, longitude 81°28.64'W and the platform in latitude 30°42.25'N, longitude 81°28.67'W on TP-00202 (1978) are in conflict with the positions of these items, located by detached positions, on the present survey. Chart the locations of these items as shown on the present survey.

cc:
OA/C35
OA/C351





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

AUG 5 1980

OA/C351:SF

TO: OA/CAM - Richard H. Houlder
FROM: *[Signature]* / OA/C3 - Roger F. Lanier
SUBJECT: H-9806 (1979), OPR-G324-HFP-78, Georgia/Florida, Cumberland Sound,
Tiger Creek to Mill Creek, 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 April 21, 1980 (copy attached), and the Hydrographic Survey Inspection Team Report, dated February 19, 1980, 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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