

9805

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-2, 5-1-79.....
Office No..... H-9805.....

LOCALITY

State Georgia.....
General Locality Cumberland Sound.....
Locality Kings Bay.....

1979

CHIEF OF PARTY

T.W. Richards.....

LIBRARY & ARCHIVES

DATE Dec. 6, 1979.....

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

5036

AREA 3
- 11489 A
- 11503
- 11504
~~11502~~

H-9805

HYDROGRAPHIC TITLE SHEET

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

HSB-2.5-1-79

State Georgia

General locality Cumberland Sound

Locality Kings Bay

Scale 1:2,500 Date of survey Feb. 8, 1979-Apr. 18, 1979 *JD 039 077*

Instructions dated 31 July 1978 Project No. OPR-G324-HFP-78

Vessel Hydrographic Surveys Branch - HFP-3

Chief of party Thomas W. Richards

Surveyed by Lt. Marcella J. Bradley

Soundings taken by echo sounder, hand lead, pole All

Graphic record scaled by MB, LG, RS, JD, JO, DE

Graphic record checked by MB

Protracted by _____ Automated plot by AMC - Xyninetics 1200 *Field - PDP/8e*

Verification by AMC Verification Branch

Soundings in ~~fathoms~~ feet at MLW ~~MLW~~

REMARKS:

MB - Marcella Bradley

LG - Lloyd Gilden

RS - Robert Snow

JD - Jon Daniel

JO - John Oswald

DE - Dave Elliott

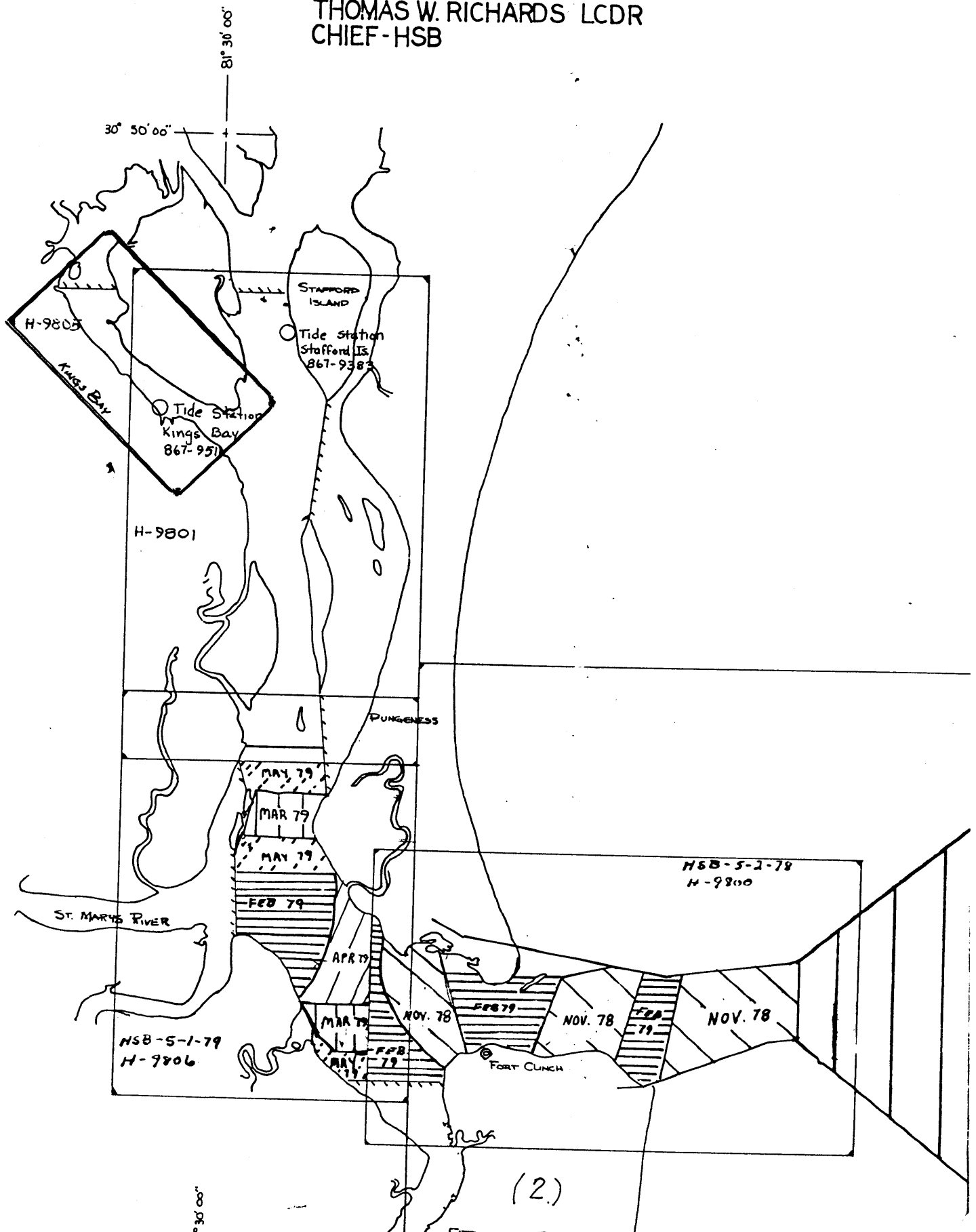
*Applied to stds 4-24/80
MB*

(1.)

CHART - 11502 (C&GS 1242)

NOAA HFP-2

THOMAS W. RICHARDS LCDR
CHIEF-HSB



DESCRIPTIVE REPORT
To Accompany
HYDROGRAPHIC SURVEY H-9805, HSB-2.5-1-79

Scale: 1:2,500

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

Officer in Charge: Lt. Marcella J. Bradley

Hydrographic Surveys Branch, Hydrographic Field Party #3

Launch 1283

A. PROJECT

This survey was accomplished in accordance with Project Instructions OPR-G324-78, Navigable Area Survey, St. Marys River to Kings Bay, Georgia, dated July 31, 1978. Project instructions were supplemented by the following:

Change No. 1, September 20, 1978

Change No. 2, November 7, 1978

Change No. 3, February 5, 1979

Change No. 4, May 9, 1979

In addition, a letter from Chief, HSB, to the Associate Director of Marine Surveys and Maps, July 31, 1978, and a reply to the Director, AMC, from the Associate Director of Marine Surveys and Maps, August 15, 1978, requested and granted authorization for the use of range-azimuth surveying techniques on this 1:2,500 scale basic hydrographic survey.

B. AREA SURVEYED

This survey was of Kings Bay, Georgia, within the approximate limits of latitude 30°48'45"N to the north and Longitude 81°30'00"W to the east where the bay meets Cumberland Sound. This survey was conducted during the period from February 8, 1979 to April 18, 1979, inclusive.

C. SOUNDING VESSEL

All soundings on this sheet were obtained using Launch 1283, EDP number 1283. This is a 17-foot Monark utility boat powered by an 85hp outboard engine. The vessel is configured as shown in Photograph #1, pg. 31. No problems were encountered with its use.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

All echo soundings on this sheet were obtained using a Raytheon 719-B fathometer with a calibrated velocity of sound through water of 800 fms/sec. (S/N 5881 was used on JD 108, and S/N 6211 was used on all other days.) Certain shallow soundings were obtained using a sounding pole, and

soundings along the dock at Kings Bay Navy Base were obtained via leadline. No faults were observed in the equipment which might have affected the accuracy of sounding. The lead line was compared with a steel tape measure on March 8, 1979, and found to be accurately marked.

A settlement and squat test for Launch 1283 was conducted in Kings Bay, Georgia on February 14, 1979. Results of the test are included in the Appendix and indicate a correction of +0.1 foot to soundings at the survey speed of 1500 rpm's used on this survey. Settlement and squat corrections will be applied via the TC/TI tape during smooth plotting at AMC and were not applied to the field sheets. A transducer draft correction of 1.0 foot and all fathometer initial trace corrections, the latter being generally maintained at zero on line, have been applied to soundings on the field sheets and will be applied to the smooth sheet at AMC via corrector tapes.

Corrections to echo soundings for variations in the velocity of sound through water and any residual instrument error were determined from direct comparison bar checks. Chain leads for 1283's bar check gear were checked on JD 67 and found to be marked incorrectly. These were comparatively old chains which had been remarked on JD 333, 1978. It is apparent the chains were mismarked at that time. Therefore, one set of line correctors have been applied to all direct comparisons obtained prior to JD 67. Replacement chain leads were purchased and marked on JD 67. These replacements were then checked on JD 103 and found to have stretched. Line correctors were determined to be 0 feet for depths checked on JD 74, +0.1-+0.2 feet on JD 78, and 0 feet again on JD 108 after the leads were remarked on JD 103 (see Direct Comparison Logs and Line Corrector Determination Graphs in Appendix, page 17). Bar check data were averaged and correctors determined as described in the Hydrographic Manual. These correctors will be applied to the smooth sheet at AMC via Velocity Table 1. Velocity correctors were not applied to soundings plotted in the field.

E. HYDROGRAPHIC SHEETS

Field sheets were prepared by HFP-3 using our PDP-8/e computer and complot plotter. Field records will be forwarded to AMC for verification and smooth plotting.

All data were logged manually, then computer reformatted and plotted on HFP-3's hydroplot system. Sheets one and three of four show main scheme hydrography, and sheets two and four show crosslines, bottom samples, developments and detached positions for the north and south halves of this smooth sheet, respectively. The skew used for the grid on the semi-smooth sheets and sheets three and four of the

final field plot was 331°. The boat sheet was inadvertently prepared with a skew of 333°.

F. CONTROL STATIONS

All control stations are of third order, class one accuracy or better. Control station positions are from a 1978 traverse by Mr. R. Tibbetts, Photo Party #62. A copy of the signal report, CM-7804-GA, January-July, 1978, Kings Bay to St. Marys Entrance, is included with the survey data. A listing of control stations used by HEP-3 is included in the Appendix.

G. HYDROGRAPHIC POSITION CONTROL

Sounding line position control was range-azimuth. The following control equipment was used:

<u>EQUIPMENT</u>	<u>S/N</u>	<u>JD'S USED</u>
Wild T-2, read to the nearest 1/2 min.	12118	All days
Del Norte Master "78"	278	39-61, 108
Del Norte Master "78"	162	74
Del Norte Remote "72"	256	All days
Del Norte Trisponder, DMU	429	All days
Geodimeter	1285	66

The geodimeter listed above was also used to determine certain distances used for daily calibration of Del Norte equipment.

Del Norte equipment was co-located with the theodolite, the theodolite was read to the nearest 1/2 minute, and the launch was never over 1,000 meters from the theodolite and Del Norte during surveying operations. In addition, Del Norte was calibrated twice daily, and sometimes more frequently, along distances between stations determined by direct geodimeter measurement. Differences between morning and afternoon calibrations never exceeded four meters. Calibration distances for this survey ranged from 93 meters to 833 meters, and 1397 meters for the first day of operation only. Stations 25, 26 and 27 were recoverable points to which geodimeter distances were measured, and were used for Del Norte calibration purposes only.

Del Norte correctors will be applied via corrector tapes to the smooth sheet and were similarly applied to the field sheets.

H. SHORELINE See Verifier's Report

Shoreline details were transferred to the field sheets from Class III manuscripts TP-00193, TP-00195, and TP-00196 dated September, 1978. Two definite shoreline changes were observed in the field and detached positions were taken at the high water line to delineate them. The changes are shown on sheet three of four at 30°47'46", 81°30'20", Pos. 1398-1400 and at 30°47'34", 81°30'20", Pos. 1391-1397. Class one manuscripts were received by HFP-3 after final field plotting of most data was accomplished. These manuscripts are included with survey data and should be used for the smooth sheet shore line at AMC. *D.P.'s locating S.L. were taken at a time when the tide was less than MHW according to the tide correctors Z.R.S.* *Range of tide is 6.4 ft. D.P.'s locating S.L. were taken at 5.0 to 5.2 ft. of tide (positions 1391 to 1400)*

Because of the many shoreline changes still resulting from dredging and construction in this area, careful revision of the shoreline will be needed.

I. CROSSLINES See Verifier's Report

Crosslines were run at 11.9% of the main scheme hydrography. Crossline agreement is within two feet, and disagreements will certainly be resolved by the application of smooth tide data.

J. JUNCTIONS See Verifier's Report.

There were no junctioning requirements for this survey to the north, and it junctions to the east with Contemporary Survey H-9801 which was surveyed concurrently by this party with the same sounding vessel and sounding equipment was good.

K. COMPARISON WITH PRIOR SURVEYS See Verifier's Report

This survey was to be compared with Prior Survey H-5753, 1:10,000, 1935. The entire area covered by this survey has changed so drastically that a detailed comparison is of little value. In 1935, the Navy pier had not been built, nor had the bay been dredged.

PRESURVEY REVIEW ITEM #1

The piles, PA, charted in Lat. 30°48.32', Long. 81°31.32' were found at 30°48.19", 81°31.21", Pos. 668-670. These piles bare 19.24 feet at ~~predicted M.L.W.~~ ^{MHW}, and should be charted as shown. (See photos #2 and 3, pg. 31). *Class I topo positions are shown on the smooth sheet. (BP-107093 [TP-00195])*

L. COMPARISON WITH THE CHART See Verifier's Report

This survey was compared with Chart 11503; 1:20,000, 29th Edition, July 9, 1977.

1. The pier charted at 30°48'05", 81°31'05" was found inshore of the grass line, Pos. 307. The supports of this pier

are solid, but the decking is in disrepair. There are no immediate plans to refurbish this pier according to the Base Operations Officer so the hydrographer recommends that it be charted in ruins.

2. Comparisons of depths show the lower turning basin to be generally five feet deeper than the tabulated channel depths. This is due to recent dredging. The upper turning basin has not been recently dredged, and depths there are within two feet of the tabulated depths.

3. See Section K, Presurvey Review Item #1.

4. See Section N, Aids to Navigation, for a discussion of the changes noted in charted aids to navigation.

5. A distinct change in the shoreline appears in the vicinity of the point of land charted at 30°48'23", 81°31'05" and northward of the point. Soundings 10-12 feet deeper than those charted were found 100 meters from shore in the vicinity 30°48'40", 81°31'12". The shoal charted at 30°48'42", 81°-31'17" was located nearby its charted position, baring one foot at ~~predicted~~ MLW. In the channel between the upper and lower turning basins, the 6-foot, 12-foot and 18-foot depth contours were found to be essentially unchanged, with depths found in the channel to be generally 1-2 feet shallower than tabulated.

In addition to the piles, PA, discussed in Section K, PRS ITEM #1, the following uncharted piles were located in the upper turning basin:

Pos. 1102, an octagonal concrete pile, bare ² feet at *MHW*, ~~predicted MLW~~, see Photo #4, pg. 32.

⁷ Pos. 1278-1279, two concrete piles ^{uncovering 5} ~~baring 3 1/2~~ feet ^{@ MLW} and ~~5 1/2~~ feet at ~~predicted MLW~~, ^{EINT} respectively. A note "piling (4)" appears on the manuscript at this location, although only two pilings ^{es} are actually shown and only two were actually found by HFP-3. Continuous activity of the dredging company in this area made adequate searching or chain dragging for the other two pilings indicated by the manuscript impossible. Recommend two pilings ^{es} be charted as shown on the field sheet.

6. Also not charted, and not appearing on the Class I manuscript, are two additions to the southern end of the Navy dock in the lower turning basin. These additions are a tender mooring at 30°47'40.5", 81°30'36.5" and a small boat platform at 30°47'39", 81°30'35", Pos. 1249-1254, and 1300-1307 respectively. See Photograph #5, and especially the photograph on Page 15-17 of the Fleet Guide to Kings Bay published by the Defense Mapping Agency, included in the separates following the text of this report. Note: Also part of the new tender

mooring are two mooring buoys, Pos. 1320-1321, located at 30°47'49", 81°30'32" and 30°47'44", 81°30'26.3" respectively. *Chart these items as shown on the present survey*

M. ADEQUACY OF THE SURVEY

This survey is complete and adequate to supercede prior surveys for charting. Revisory photogrametry should definitely be accomplished after construction in this area is complete and shoreline changes due to dredging have ceased. *(2110)*

N. AIDS TO NAVIGATION

1. Buoys "27" and "30", charted at 30°47'33", 81°30'08" and 81°47'42", 81°30'24", respectively, have been discontinued. (USCG Notice to Mariners, 29 Mar 1979)

2. Light "31" charted at 30°47'36", 81°30'25" has been discontinued and the structure removed. (USCG Notice to Mariners, 28 Mar 1979)

3. Range "E" Rear Light, charted at 30°47'43", 81°30'03", which was used as our control station #24, will be relocated on Cumberland Sound Range "C" Rear Light. The old structure will be removed as noted in USCG Notice to Mariners, March 28, 1979.

4. Range "F", Front and Rear Lights were permanently discontinued and the structure removed as reported in USCG Notice to Mariners, March 28, 1979.

5. Two fixed aids to navigation have been established while this survey was in progress. They are:

Light "46", 30°47'46", 81°30'19", Pos. 1322

Light "48", 30°48'01". 81°30"45", Pos. 1317

The USCG Light List will no doubt be revised when the aids to navigation in this area are all in place. Further information is available on the chart showing planned aids to navigation, (obtained from USCG, LCDR Wilkins, FTS 350-5621) which is included in the accordion folder containing fathograms and teletype listings for Hydrographic Survey H-9801, HSB-5-5-78. Further information is also included on Forms 76-40, Non-floating Aids to Navigation, included in the appendix of the descriptive report accompanying H-9801.

O. STATISTICS

Total Number of Positions	1331
Nautical Miles of Sounding Line	36.2
Nautical Miles of Crossline	3.8
Nautical Miles of Development	0.5

Total Nautical Miles of Hydrography	40.5
Total Square Nautical Miles of Hydro	0.4
Total Number of Bottom Samples	25

P. MISCELLANEOUS

1. HFP-3 was unable to obtain soundings in an area approximately 125 meters x 50 meters around 30°48'22", 81°31'21" due to dredge company equipment here, see Photograph #7, pg. 33. Similarly, a large booster pump barge docked at 30°47'56", 81°30'54" and barges docked at 30°47'46", 81°30'43", see Photograph #8, pg. 33, prevented keel soundings at those locations. Lead line soundings were obtained along the entire length of the dock.

2. A supplemental 40-foot depth contour was drawn in the lower turning basin.

3. The island opposite the Kings Bay Navy Dock at 30°48.2', 81°30.5' is known locally as Crab Island. It is recommended that this name be added to the chart. (See Photograph #6, pg. 33.)

Q. RECOMMENDATIONS

Careful revisory photogrammetry should be accomplished at a later date. Final positions of aids to navigation should be verified with LCDR Wilkins, USCG, District Seven, Miami, Florida, FTS 350-5621. Post-dredging surveys should be obtained from the Army Corps of Engineers.

R. AUTOMATED DATA PROCESSING

The following computer programs were used during this survey:

RK201	Grid, Signal & Lattice Plot	4/18/75
RK212	Visual Station Load & Plot	4/10/74
RK216	Range-azimuth Non Real Time Plot	2/05/76
RK300	Utility Program	2/10/76
RK330	Data Check & Reformat	3/21/76
RK407	Geodetic Inverse-Direct Computation	10/03/75
AM602	Extended Line Oriented Editor (ELINORE)	5/20/75
AM500	Predicted Tide Generator	11/10/72

S. REFERENCE TO REPORTS

Signal Report, CM-7804-GA, Jan-Jul 1978, Kings Bay to St. Marys Entrance, Photo Party #62, Mr. R. Tibbetts.

Descriptive Report to Accompany Hydrographic Survey H-9801, HSB-5-3-78.

Respectfully submitted,

Robert Lewis
 For Marcella J. Bradley, LT, NOAA
 Officer-in-Charge, HFP-3

FIELD TIDE NOTE

Field tide reduction of soundings was based on predicted tides from Savannah River Entrance, Georgia, corrected to St. Marys River Entrance, north jetty, and were interpolated by PDP8/e computer utilizing Program AM500. Times of both predicted and recorded tides are GMT.

The following tide gage was installed in the survey area:

<u>SITE</u>	<u>LOCATION</u>	<u>PERIOD</u>
Kings Bay, Georgia #867-9511	30°47' ^{38.60"} 68' 81°30' 65' 35.80"	January 15, 1979 to April 18, 1979

On April 12, 1979, a new set of levels were run to this staff due to a noticeable shifting of this awkwardly located installation. Field comparison of these leveling results with levels obtained at its installation January 15, 1979 show that the staff is now approximately 0.2 feet lower. This sinking must be assumed to have begun immediately upon installation and to have continued at a linear rate to its level on April 12, 1979.

Permission was obtained on April 24, 1979 from C231 to remove this gage at completion of hydrographic operations, and to substitute Station 867-9758, Dungeness Cumberland Island, Georgia for long term tidal predictions.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY

Date : April 16, 1979

Reply to Attn. of:

To : Chief, Tides Branch

From : Lt. Marcella J. Bradley, NOAA
Officer in Charge, HFP-3

Subject: Request for Tide Data

Please provide data from the King's Bay tide gage, 867-9511, for the period of its operation to Mr. Richard Goff at the following address:

Hydrolics Department
Department of the Army
Savannah Corps. of Engineers
P.O. Box 889
Savannah, Georgia 31402
Phone: FTS 248-8456

In addition, please provide data, and zoning information to AMC Processing Division for surveys H-9805 (HSB-2.5-1-79) and H-9801 (HSB-5-3-78), project OPR G324-HFP-79.

The following items of hydrography for H-9805 include two hours before and after actual times:

J.D. (1979)	Hydro begins (GMT)	Hydro ends (GMT)
39	1307	2047
40	1425	1920
43	1554	2214
45	1320	2217
47	1310	2200
58	1406	2153
60	1245	2350
61	1301	2152
66	1220	2004
74	1335	2135
78	1240	1900

Times and areas of hydrography for H-9801 are shown on the attached chartlet.

Hydrographic Surveys Branch
439 West York Street
Norfolk, Virginia 23510

CAM11/MB

May 4, 1979

TO: Chief, Tides Branch

FROM: Lt. Marcella J. Bradley, NOAA
O Officer in Charge, HFP-3

SUBJECT: Request for Tide Data

Please continue to provide Kings Bay, Georgia tide data to Mr. Richard Goff at the following address:

Hydrolics Department
Department of the Army
Savannah Corps of Engineers
P.O. Box 889
Savannah, Georgia 31402

(FTS-248-8456)

In addition, please provide tide data and zoning information to AMC, Processing Division for the following surveys:

H-9805, HSB2.5-1,79, Kings Bay, Georgia
(Times include two hours before and after actual times of hydrography.)
J.D. 108 (1979), 1600-2030 (GMT), Gage #867-9511

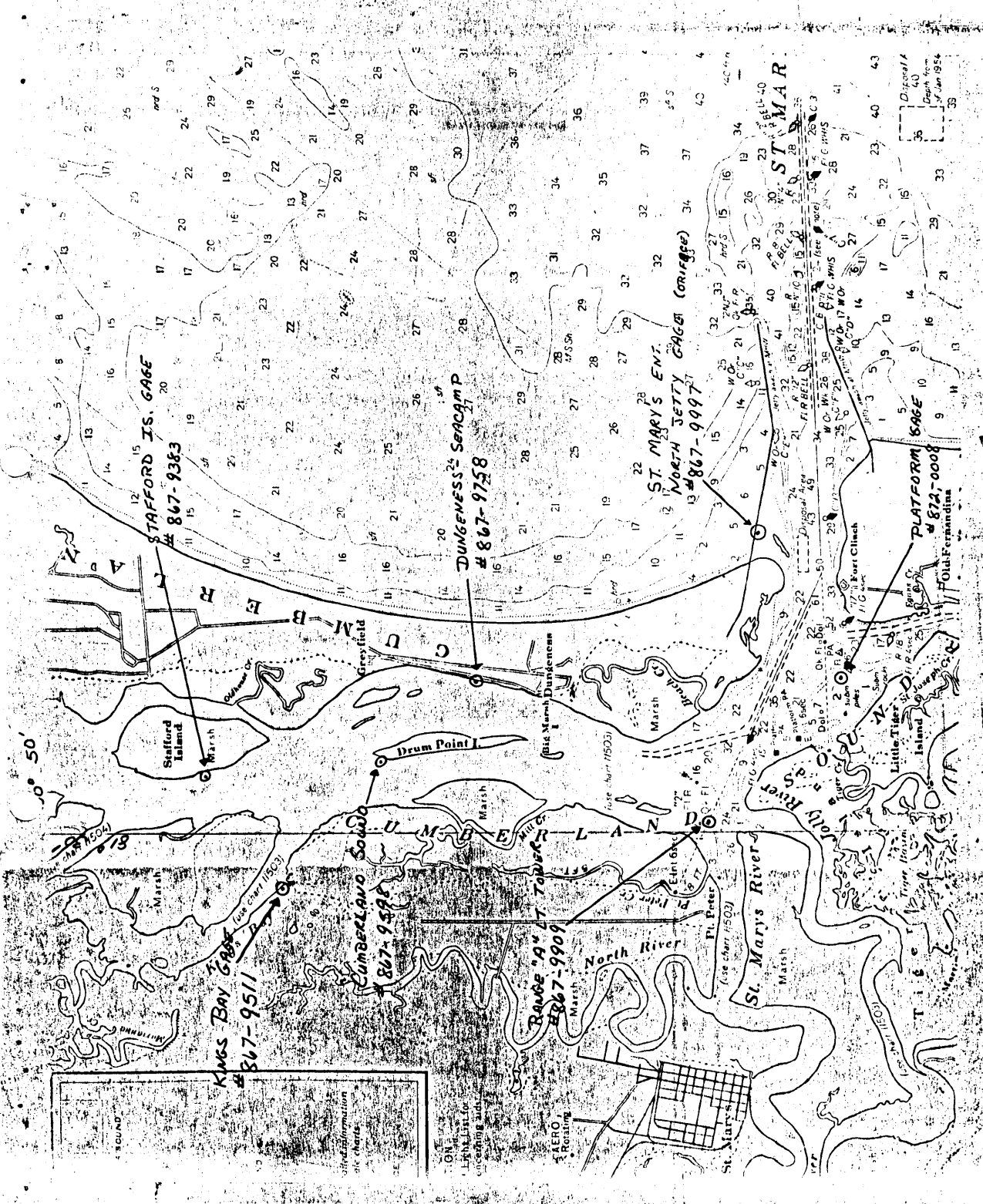
H-9801, HSB-5-3-78, Cumberland Sound, Georgia
(Times include two hours before and after actual times of hydrography.)
J.D. 107 (1979), 1520-2210 (GMT), Gages #867-9758, 867-9598, and 867-9383
J.D. 108 (1979), 1320-1810 (GMT), Gages #867-9758 and 872-0005

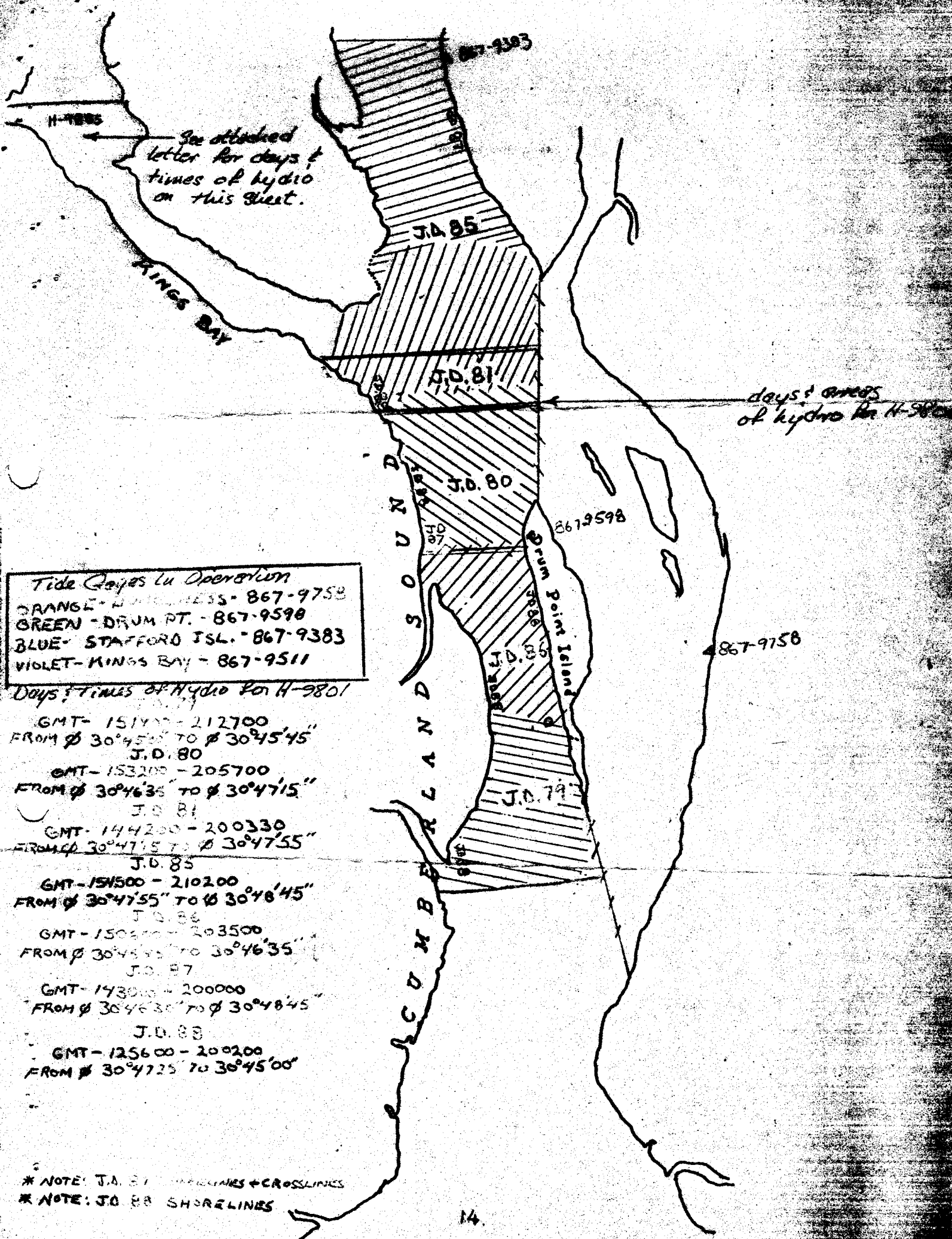
The following tide gages have been removed as of May 1, 1979:

867-9511, Kings Bay, 30°47.8'N, 81°30.7'W
867-9383, Stafford Island, Cumberland Sound, Georgia, 30°48.7'N, 81°29.4'W
867-9598, Cumberland Sound, 30°46.8' N, 81°29.7' W

Leveling records for the removal of these gages are included with April tide gage records.

Tide station 867-9758, Dungeness, Cumberland Island, Georgia, 30°45.2'N 81°28.5'W, remains in operation. Mr. Rick Sise, a National Park Service employee who works on Cumberland Island, has been contracted to observe this gage as of May 1, 1979. NOAA Form 36-14, Agreement for Reports, and notification of this contract have been forwarded via HSB to C-231.





See attached letter for days & times of hydro on this sheet.

H-9885

KINGS BAY

867-9383

J.D. 85

J.D. 81

days & areas of hydro for H-9801

J.D. 80

867-9598

Tide Gauges in Operation
 ORANGE - DUMFRIES - 867-9758
 GREEN - DRUM PT. - 867-9598
 BLUE - STAFFORD ISL. - 867-9383
 VIOLET - KINGS BAY - 867-9511

Days & Times of Hydro for H-9801

GMT - 151400 - 212700
 FROM ϕ 30°45'00" TO ϕ 30°45'45"
 J.D. 80

GMT - 153200 - 205700
 FROM ϕ 30°46'35" TO ϕ 30°47'15"
 J.D. 81

GMT - 144200 - 200330
 FROM ϕ 30°47'15" TO ϕ 30°47'55"
 J.D. 85

GMT - 151500 - 210200
 FROM ϕ 30°47'55" TO ϕ 30°48'45"
 J.D. 86

GMT - 150300 - 203500
 FROM ϕ 30°45'55" TO ϕ 30°46'35"
 J.D. 87

GMT - 143000 - 200000
 FROM ϕ 30°46'35" TO ϕ 30°48'45"
 J.D. 88

GMT - 125600 - 200200
 FROM ϕ 30°47'25" TO ϕ 30°45'00"

J.D. 79

867-9758

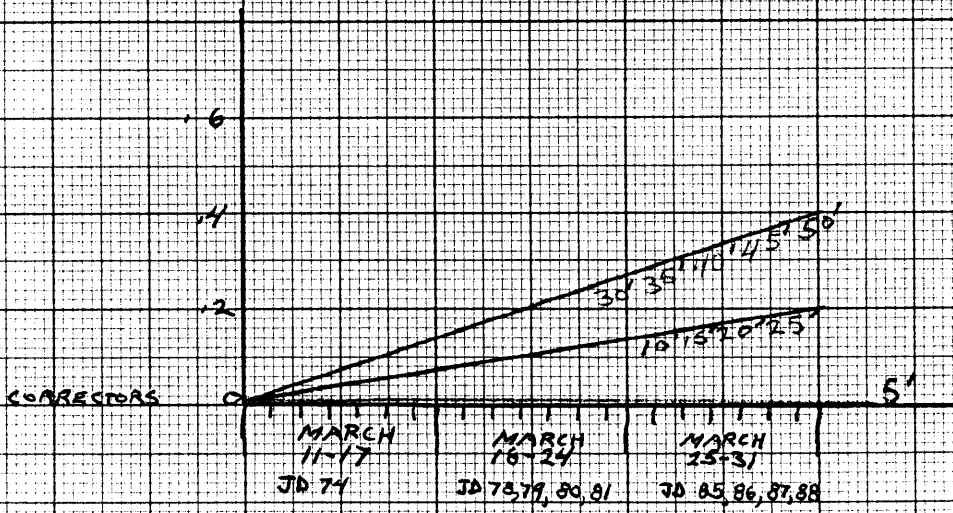
L.C.M.B. SHORELINE

Drum Point Island

* NOTE: J.D. 81 SHORELINES + CROSSLINES
 * NOTE: J.D. 88 SHORELINES

CORRECTOR SCALE OF BARCHECK CHAINS

- 5 - 5.0
- 10 - 10.2
- 15 - 15.2
- 20 - 20.2
- 25 - 25.2
- 30 - 30.4
- 35 - 35.4
- 40 - 40.4
- 45 - 45.4
- 50 - 50.4



Velocity Table #1

H-9805

HSB-2.5-1-79

Lch 1283

000052	0	0000	0001	000	128300	009805
000097	0	0002				
000182	0	0004				
000256	0	0006				
000324	0	0008				
000392	0	0010				
000470	0	0012				
001000	0	0014				
999999	0	0014				

✓MB

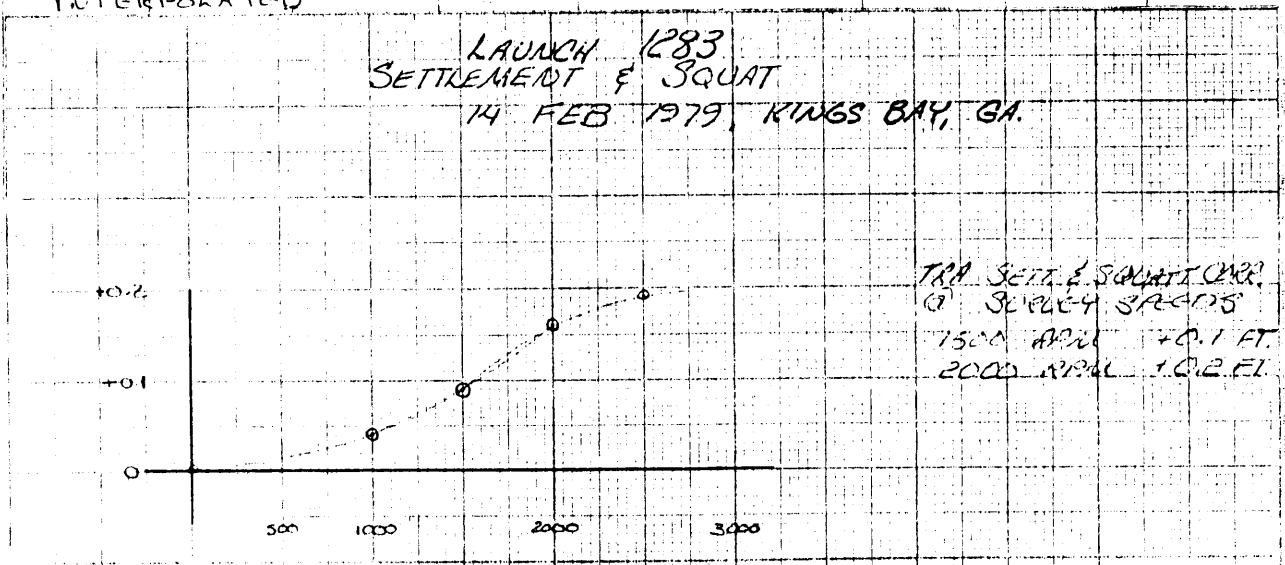
TIME	RPM	LEVEL	DIFF
1708	0	11.255	
1710	1000	11.326	
	0*	✓11.298	0.028✓
1711	1500	11.413	
	0*	✓11.319	0.094✓
1712	2000	11.505	
	0*	✓11.341	0.164✓
1713	2500	11.582	
	0*	✓11.362	0.220✓
1715	0	11.405	
1716	1000	11.481	
	0*	✓11.434	0.047
1717	1500	11.548	
	0*	✓11.463	0.085✓
1718	2000	11.672	
	0*	✓11.492	0.180✓
1719	2500	11.705	
	0*	✓11.521	0.184✓
1720	0	11.550	
1721	1000	11.625	
	0*	✓11.578	0.047
1722	1500	11.695	
	0*	✓11.607	0.088
1723	2000	11.781	
	0*	✓11.635	0.146
1724	2500	11.835	
	0*	✓11.664	0.171
1725	0	11.692	

RPM	DIFF	TRA CORR
0	0	0
1000	0.028	
	0.047	
	0.047	✓
	AVG. +0.04	
1500	0.094	
	0.085	
	0.088	✓
	AVG. +0.09	
2000	0.164	
	0.180	
	0.146	✓
	AVG. +0.10	
2500	0.220	
	0.184	
	0.171	✓
	AVG. +0.19	

* INTERPOLATED

MB
✓ JLD

LAUNCH 1283
SETTLEMENT & SQUAT
14 FEB 1979, KINGS BAY, GA.



SIGNAL LIST

H-9805 (HSB-2.5-1-79)

010	3	30	47	46958	081	30	45552	250	0010	000000	H-62-01-GA-78
014	3	30	48	07714	081	31	08906	250	0000	000000	H-62-06-GA-78
016	3	30	48	34477	081	31	32404	250	0000	000000	H-62-08-GA-78
017	4	30	48	52682	081	31	07535	139	0000	000000	H-62-09-GA-78
018	4	30	48	21656	081	31	04572	250	0000	000000	H-62-10-GA-78
021	4	30	47	51612	081	30	24382	250	0000	000000	H-62-13-GA-78
022	2	30	47	42951	081	30	03067	250	0000	000000	H-62-14-GA-78
024	2	30	47	37646	081	29	54112	139	0005	000000	Kings Bay, Range E Rear Light, 1978

All control was located by Photo Party #62.

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

**U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NONFLOATING AIDS OR LANDMARKS FOR CHARTS**

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-HFP3

STATE
Georgia

LOCALITY
Kings Bay

DATE
3/19/79

OPR PROJECT NO. OPR-G324

JOB NUMBER -----

SURVEY NUMBER H-9805

DATUM NA 1927

The following objects HAVE BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS.

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.)	POSITION				LONGITUDE // D.P. Meters	OFFICE	FIELD	CHARTS AFFECTED
		LATITUDE		LONGITUDE					
		° /	// D.M. Meters	° /	// D.P. Meters				
LIGHT	Light 46 (Fl. R.)	30 47	46.3	81 30	19.0		Range/Azimuth Del Norte/T2	11503	
LIGHT	Light 48 (Fl. R.)	30 48	00.6	81 30	44.6		Range/Azimuth Del Norte/T2	11503	

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	M.J. Bradley, LT., NOAA
POSITIONS DETERMINED AND/OR VERIFIED	M.J. Bradley, LT., NOAA
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	
<p align="center">INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)</p>	
<p>OFFICE</p> <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 P - Photogrammetric Vis - Visually 5 - Field identified 6 - Theodolite 7 - Planetable 8 - 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>FIELD (Cont'd)</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>
<p>ORIGINATOR</p> <p><input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)</p> <p>FIELD ACTIVITY REPRESENTATIVE</p> <p>OFFICE ACTIVITY REPRESENTATIVE</p> <p><input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE</p>	

Richards

NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.		U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION FOR CHARTS				ORIGINATING ACTIVITY	
<input type="checkbox"/> TO BE CHARTED <input type="checkbox"/> TO BE REVISED <input checked="" type="checkbox"/> TO BE DELETED		REPORTING UNIT (Field Party, Ship or Office) Coastal Mapping Div. A.M.C. Norfolk, Va.	STATE Georgia	LOCALITY Kings Bay to St. Marys Entrance	DATE Mar. 1979	<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)	
The following objects HAVE <input checked="" type="checkbox"/> HAVE NOT <input type="checkbox"/> been inspected from seaward to determine their value as landmarks.		DATUM N.A. 1927		METHOD AND DATE OF LOCATION (See instructions on reverse side)			
OPR PROJECT NO. G324	JOB NUMBER CM-7804	SURVEY NUMBER TP-00196	POSITION		OFFICE	FIELD	CHARTS AFFECTED
CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	LATITUDE ° / ' // D.M. Meters	LONGITUDE ° / ' // D.P. Meters				
LIGHT ✓	Kings Bay Range E Front Light	30 47.3	81 29.7			Removed F-V-Vis. July 1978	11503 ✓
LIGHT ✓	Kings Bay Range F Front Light	30 47.6	81 30.1			Removed F-V-Vis. July 1978	11503 ✓
LIGHT ✓	Kings Bay Range F Rear Light	30 47.7	81 30.2			Removed F-V-Vis. July 1978	11503 ✓
LIGHT ✓	Kings Bay Light 31	30 47.6	81 30.4			Removed F-V-Vis. July 1978	11503 ✓

RESPONSIBLE PERSONNEL

TYPE OF ACTION	NAME	ORIGINATOR
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

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

APPROVAL SHEET
SURVEY H-9805 (HSB-2.5-1-79)

The hydrographic records transmitted with this report are complete and adequate to supersede prior surveys for charting with no additional hydrography recommended. Revisory photography should be scheduled soon to better delineate shoreline changes resulting from recent dredging and construction in the area.

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

Approved and forwarded,

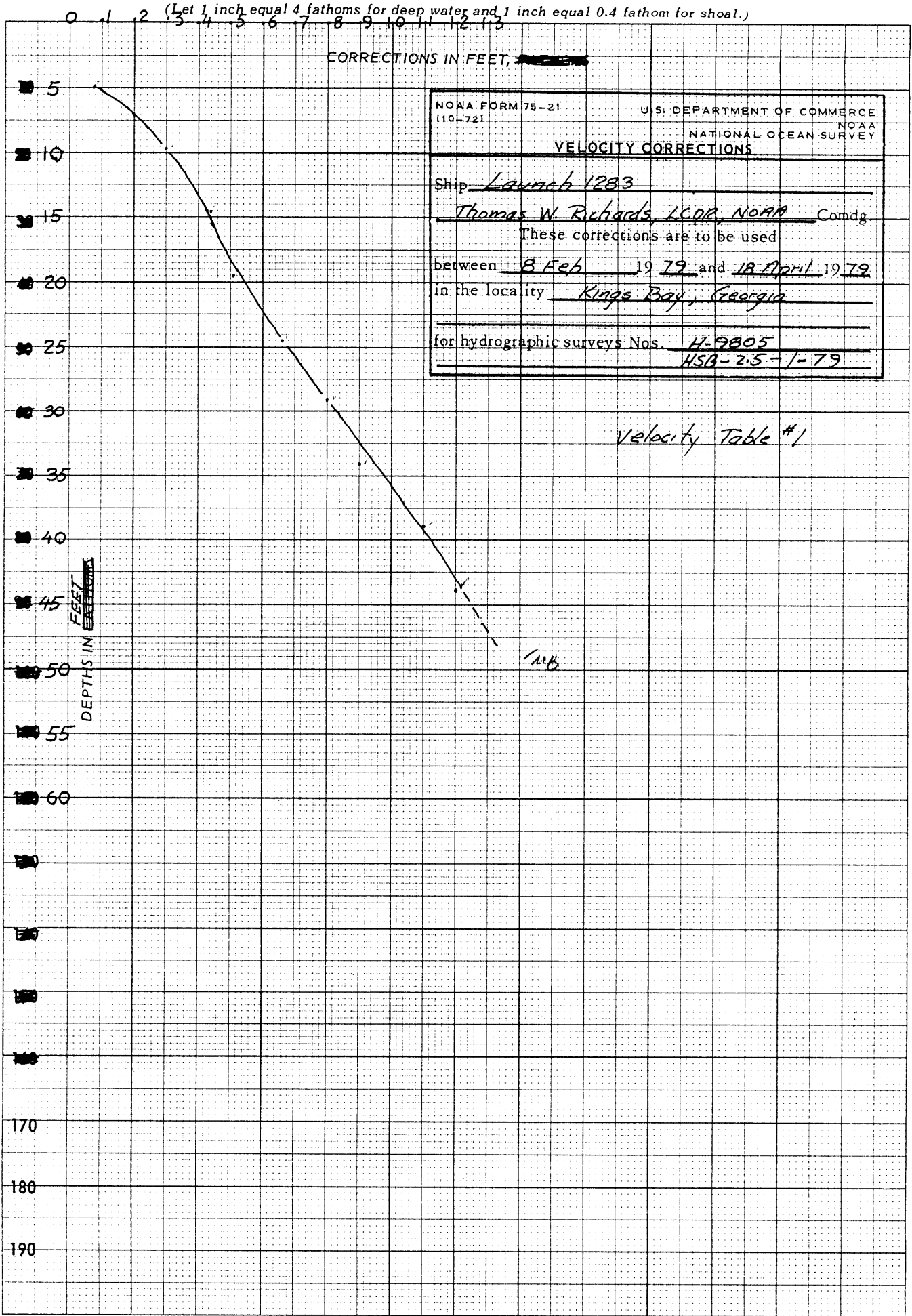


Thomas W. Richards
Lt. Cdr., NOAA
Chief, Hydrographic Surveys Branch

46 1240

20 X 20 TO THE INCH • N. B. BUCHHEIS
SER CO. MADE IN U.S.A.
K&E

(For deep water add a 0 to these figures)



Atlantic Marine Center
Hydrographic Surveys Branch
439 W. York Street
Norfolk, Virginia 23510

July 31, 1978

CAM11/TWR

TO: Associate Director
Marine Surveys and Maps (C3)

THRU: Chief, Operations Division
Atlantic Marine Center

FROM: LCDR Thomas W. Richards
Chief, Hydrographic Surveys Branch

SUBJECT: Request to use Range/Azimuth Surveying Techniques

Permission is requested to use Range/Azimuth surveying techniques on the 1:2,500 hydrographic survey work on OPR-G324 in lieu of visual hydrography.

HSB's error analysis of ranges which are determined by Del Norte and azimuths which are determined by theodolite convinces us that the position error introduced by Range/Azimuth would be less than $1\frac{1}{2}$ m.m. at the scale of the 1:2,500 survey (less than 3.75 meters).

HSB's error analysis assumes the following:

- a) that the Del Norte is co-located with the theodolite,
- b) that azimuth errors will not exceed ± 1 minute *,
- c) that the launch will never be over 1,000 meters from the theodolite and Del Norte.
- d) that Del Norte range errors will not exceed ± 3 meters **.

* an azimuth error of 1 minute at 1,000 meters is equal to a 0.29 meter error.

** Del Norte claims ± 3 meters for distances up to 50 kilometers and since our daily calibrations and our daily operations will be within one kilometer, we should easily be able to stay within this ± 3 meters.



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

NY 11
 TWR

C351/DLS

AUG 15 1978

TO: Director
 Atlantic Marine Center

FROM: Richard H. Houlder *R.H. Houlder*
 Associate Director
 Marine Surveys and Maps

SUBJECT: Request to use Range-Azimuth Surveying Techniques
 (CAM11/TWR memo, 7/31/78)

Your request to employ range-azimuth surveying techniques on the 1:2,500 scale hydrographic survey work on OPR-G324 is approved. The strict controls which you listed must be followed.

Since cartographic problems on large-scale surveys sometimes arise, the field party should closely compare all hydrography and topographic manuscripts and resolve any discrepancies while in the area. *Discrepancies were not resolved, Class I topo positions were shown on the present survey. shoreline is considered approximate at best.*

JRS

CAM 11/ STAFF

TR *TWR*
 RL *RL*
 TK _____
 RD _____

 CP _____

1) FILE WITH OPR-6324 NOTEBOOK.
 2) ALSO FILE THIS MEMO dtd 7/31/78 WITH OPR-6324



APPROVAL SHEET
FOR
SURVEY H-9805

- 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: 10/18/79

Signed: 

Title: Chief, Verification Branch

May 3, 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): 867-9511 Kings Bay, GA

Period: February 8-March 19, 1979

HYDROGRAPHIC SHEET: H-9805

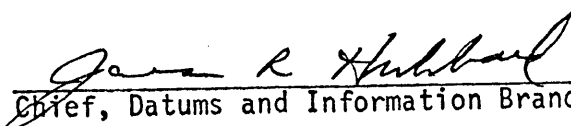
OPR: G324

Locality: Kings Bay, Georgia

Plane of reference (mean ~~low~~ low water): 3.72 ft.

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

Remarks: Zone direct .


Chief, Datums and Information Branch

GEOGRAPHIC NAMES

H-9805

Name on Survey	Source of Name											
	A	B	C	D	E	F	G	H	K			
CRAB ISLAND												1
KINGS BAY												2
CUMBERLAND SOUND												3
												4
												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25

Approved:

Chris B. Hanlon
Chief Geographer - CBx5

21 DEC 1979

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	4 & 0
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS & ARC, EXCESS	2

DESCRIP-TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						1- misc. data & tides
CAHIERS	1 - with	printouts				
VOLUMES	5					
BOXES			1 - Smooth			

T-SHEET PRINTS (List)

SPECIAL REPORTS (List)

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			1356
POSITIONS CHECKED		1356	
POSITIONS REVISED		11	
SOUNDINGS REVISED		73	
SOUNDINGS ERRONEOUSLY SPACED		50	
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	

TIME - HOURS

CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	3		
VERIFICATION OF CONTROL		3	
VERIFICATION OF POSITIONS		57	
VERIFICATION OF SOUNDINGS		47	
COMPILATION OF SMOOTH SHEET		83	
APPLICATION OF TOPOGRAPHY		16	
APPLICATION OF PHOTOBATHYMETRY		0	
JUNCTIONS		1	
COMPARISON WITH PRIOR SURVEYS & CHARTS		6	
VERIFIER'S REPORT		14	
OTHER			
TOTALS	3	227	230

Pre-Verification by J.S. Bradford	Beginning Date 07/09/79	Ending Date 07/09/79
Verification by C. Meekins, R. Roberson	Beginning Date 07/08/79	Ending Date 10/03/79
Verification Check by G.F. Trefethen	Time (Hours) 8	Date 10/05/79
Marine Center Inspection by Hydrographic Inspection Team (AMC)	Time (Hours) 7	Date 10/12/79
Quality Control Inspection by F.P. Saulsbury	Time (Hours) 56	Date 12-20-79
Requirements Evaluation by D.J. Hill	Time (Hours) 3	Date 3/25/80

G. Meyer 14 hrs 1/25/80

REGISTRY NO. H-9805

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-9805

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 12 Aug 83 TIME REQUIRED _____ INITIALS LJ

REMARKS:

ATLANTIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO.: H-9805

FIELD NO.: HSB-2.5-1-79

Georgia, Cumberland Sound, Kings Bay

SURVEYED: 8 February through 18 April 1979

SCALE: 1:2,500

PROJECT NO.: OPR-G324-
HFP-78

SOUNDINGS: Raytheon DE-719B
Fathometer, Head Lead,
Sounding Pole

CONTROL: Range-Azimuth
(Del-Norte/T-2,
Geodimeter/T-2)

Chief of Party T.W. Richards
Surveyed by M. Bradley
..... L. Gilden
..... R. Snow
..... J. Daniel
..... J. Oswald
..... D. Elliott
Automated Plot by XYNETICS 1201 Plotter (AMC)
Verified and Inked by R. Roberson
Date September 28, 1979

1. Introduction

During the preliminary stages of verification (position overlay), a major discrepancy between hydrographic and photogrammetric data was discovered. The Class I manuscripts varied greatly with the Class III manuscripts and hydrography in several marshy areas. Hydrographic data was obtained well inside of the Class I high water line in numerous areas. The problem was discussed with photogrammetry and resolved. The appended letter from OA/C342 outlines the problem's resolution. *Class I's were cancelled. New photogram. work is planned for March 1980.*

All changes in red in the Descriptive Report are by the verifier.

Projection parameters were revised during verification.

2. Control and Shoreline

Control is adequately discussed in Sections F. and G. of the Descriptive Report. The correspondence between OA/CAM11 and OA/C3 concerning range/azimuth control at the survey scale are appended.

Shoreline was taken from the previously discussed Class III manuscripts (Section 1 of this report) and applied to the smooth sheet for orientation purposes only. In areas of disagreement between hydrography and photogrammetry no shoreline was applied. Some shoreline was applied to the smooth sheet in red from the boatsheet. Two piers (one under construction, one not shown)

were constructed from detached positions and are shown in red.

Considerable discrepancy was noted between hydrographic location of offshore features (pilings) and photogrammetric locations. The pilings were found on the Class I manuscripts and were transferred to the smooth sheet from these Class I manuscripts. The hydrographic positions were rejected but elevations were retained. It is recommended that these pilings^{ES} be charted *as shown on the present survey.*

The soundings along the large ^N navy pier fell inside the pier line. The pier was not shown for this reason. *concur*

3. Hydrography

a. Sounding agreement at crossings is adequate with the following exception:

The crossline beginning at latitude 30°47'40.95", longitude 81°30'08.82" ending at latitude 30°47'54.72", longitude 81°30'35.59" (positions 965 thru 975) is apparently run along the edge of the channel and varies greatly with the main scheme hydrography. With dredging and hydrographic operations in progress simultaneously, the hydrographer should have not waited twenty one (21) days between main scheme and crosslines. *concur*

b. The standard depth curves are adequately delineated.

c. Developments run were adequate to delineate the bottom *concur* configuration and least depths.

4. Condition of Survey

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

a. Daily bar checks were not taken as per section 1.4.2 of the Hydrographic Manual.

b. Depth contours were notably wavy along the dredged area where slow starts and stops probably occurred. Only a few of these were noted in the volumes and no allowances made during plotting of the sheet. These should have been noted at each occurrence and plotted accordingly. *concur*

5. Junctions

Junction was effected with H-9801 junctions to the south. There are no junction requirements to the north. *H-9801 has not, as yet, been received in Rockville*

6. Comparison With Prior Survey

H-5753 (1934-35) 1:10,000 *12/17/19*

Comparison with this survey is most impractical. Since 1935 numerous notable cultural changes have been made to the King(s) Bay area. The two most noticeable are the dredged channel and pier facility in the bay.

The deepest sounding on the prior survey is 20 feet in the vicinity of latitude $30^{\circ}48'12''$, longitude $81^{\circ}31'06''$. This area's depths now exceed 30 feet.

Three piers on H-5753 received no mention by the hydrographer. They are as follows: *These piers were removed from the chart since they no longer exist. Do not chart these piers.*

a. $30^{\circ}47'45''$, $81^{\circ}30'46''$, this pier is the vicinity of the pier to be used by the Navy. Recommended that this pier be superseded by the present survey. *Concur - Pier is gone.*

b. $30^{\circ}48'09''$, $81^{\circ}31'10''$, this pier is described as 42 meters long and 1.2 meters wide. Recommend this pier be superseded by the present survey. *Concur - Pier is gone*

c. $30^{\circ}48'18''$, $81^{\circ}31'21''$, this pier is described as 91 meters long and 1.2 meters wide. Recommend this pier be superseded by the present survey. *Concur - Pier is gone.*

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

7. Comparison With Charts #11503 (29th Edition, July 9, 1977)
#11489 (16th Edition, June 24, 1978)

a. Hydrography

Comparison with the chart is most difficult since the extensive dredging and building program by the Navy has taken place. The following major changes should be noted:

The small portion of Range "F" and subsequent channel adjacent to the lower turning basin are now considerably wider (as much as 100 meters) than the charted channel. Consultation should be made with the Savannah District Corps of Engineers as to the channel configuration. *concur*

The point located at approximately latitude $30^{\circ}47'45''$, longitude $81^{\circ}30'24''$ has receded by approximately 25 meters. This has probably been caused by dredging in this area. *concur*

The area of the "lower turning basin" has been dredged and is considerably deeper than the tabulation on the chart. The Savannah District Corps of Engineers should be consulted for the proper tabulation and configuration of this area. *concur*

No apparent changes have ^{been} made above the "lower turning basin".

Hydrography charted outside of the limits of the channels and turning basins is in good agreement where there has been no dredging or construction as noted above. The following irregularities should be noted:

The pier charted at approximately $30^{\circ}48'06''$, longitude $81^{\circ}31'05''$ should be charted as pier ruins that fall inside of the ~~marsh~~ ^{marsh} line as per the hydrographer's comments in Section L. (1) of the Descriptive Report and a telephone conversation with the U.S. Army Corps of Engineers, Savannah District project engineer for Kings Bay, Mr. Joe Wilson (FTS 248-8822).

The charted "Piles PA", PSR Item 1, were addressed by the hydrographer in Section K. of the Descriptive Report. See Section 2. of this report for charting recommendation.

Two uncharted ~~cement~~ ^{concrete} pilings ~~as~~ were also located by the hydrographer, positions 1278-1279. See Section 2. of this report for charting recommendations.

A single concrete pile was located by the hydrographer, position 1102, and should be charted as located on the present survey.

The charted 7 foot sounding at approximate latitude $30^{\circ}48'43''$, longitude $81^{\circ}31'11''$ is in an area of 19 and 20 feet. *Chart depths as shown on the present survey.*

The charted 4 foot sounding at approximate latitude $30^{\circ}48'39''$, longitude $81^{\circ}31'13''$ is in an area of 17 and 18 foot soundings. *Chart depths as shown on the present survey.*

The charted 2 foot sounding of approximate latitude $30^{\circ}48'33''$, longitude $81^{\circ}31'14''$ is in an area of 12 foot depths. *Chart depths as shown on the present survey.*

See Section L. (6) of the Descriptive Report for recommendations of additions to the Navy pier. These additions are in red on the smooth sheet.

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

b. Controlling Depths

Controlling depth tabulations for the "Lower Turning Basin" south to this survey's limits have been changed and should be revised. Consultation with the Corps of Engineers after dredging surveys should be made for these areas. The channel's controlling depth between the turning basins is correct. The "Upper Turning Basin" controlling depth is two feet found in the extreme northern portion of the turning basin.

c. Aids to Navigation

Aids to navigation are adequately covered in Section N. of the Descriptive Report.

8. Compliance With Project Instructions

This survey adequately complies with the Project Instructions.


9. Additional Field Work

This is an adequate basic survey and no additional field work is recommended. *Accurate shoreline & pier delineations should be obtained through planned photogrammetric surveys. Accurate positions of all offshore items should also be established on the planned topo. surveys. Photos should be tide controlled & flown at MHW.*
JRS.

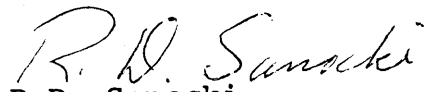
Inspection Report
H-9805

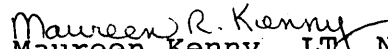
Any verification errors regarding procedures and presentation of survey data detected during inspection by the Hydrographic Inspection Team have been corrected before submission for administrative approval. HIT comments regarding quality of field work, compliance with instructions, and adequacy of the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

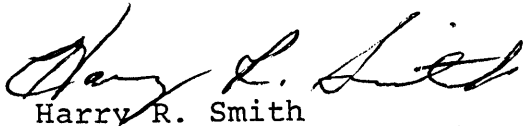
Examined and Approved:
Hydrographic Inspection Team
Date: October 12, 1979


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

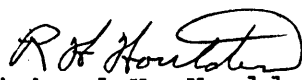
Absent
David W. Yeager, Lt. Cdr., NOAA
Field Procedures Officer
Operations Division


R.D. Sanocki
Technical Assistant
Processing Division


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


Harry R. Smith
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

December 20, 1979

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

THRU: Chief, Quality Control *gm* Branch

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

SUBJECT: Quality Control Report for H-9805 (1979), Georgia, Cumberland Sound, Kings Bay

A quality control inspection of H-9805 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, the HIT Report, and as follows:

1. Minor revisions and additions to depth curves, bottom characteristics, and descriptive information, made during quality control inspection, are shown on the one-half scale copy of the survey to be furnished verification.
2. The hydrographer's notes on the boat sheet referencing elevations of features to the chart datum are misleading since correctors used by field personnel are based on predicted tides. These notes should include the date and time the feature was observed. A subsequent application of real tide correctors at the time of verification furnishes true elevations.
3. Positional differences between offshore items located by the hydrographer and counterpart items shown on the topographic survey were not reconciled by the hydrographer. As stated in the Verifier's Report, Class I topographic survey positions for these features were transferred to the smooth sheet during verification.

The concrete slab, uncovering 5 feet at MLW, plotted in latitude 30°47'58.7"N, longitude 81°30'58.7"W was transferred to the smooth sheet during quality control from Bp-107093. This item may be one of



the two concrete slabs located by the hydrographer which have been retained on the smooth sheet. The existence of these slabs should be verified on the planned 1980 topographic survey of this area and if found their positions ascertained.

4. Elevations of piles shown on the smooth sheet during verification were generally computed in error and were corrected during quality control inspection. A method used to compute the true elevation of these piles above the appropriate datum is described on the one-half scale copy of the survey.

cc:

OA/C35

OA/C351



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.

The positions of offshore items, such as piles and bottom characteristics were used on H-4805 (BP-107091, 107093 & 107094)
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





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

APR 9 1980

OA/C351:DJH

TO: OA/CAM - Richard H. Houlder

FROM: *for* OA/C3 - *J. Austin Yeager*
Roger F. Lanier

SUBJECT: H-9805 (1979), OPR-G324-HFP-78, Georgia, Cumberland Sound,
Kings Bay, 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 20, 1979 (copy attached), and the Hydrographic Survey Inspection Team Report, dated October 12, 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.



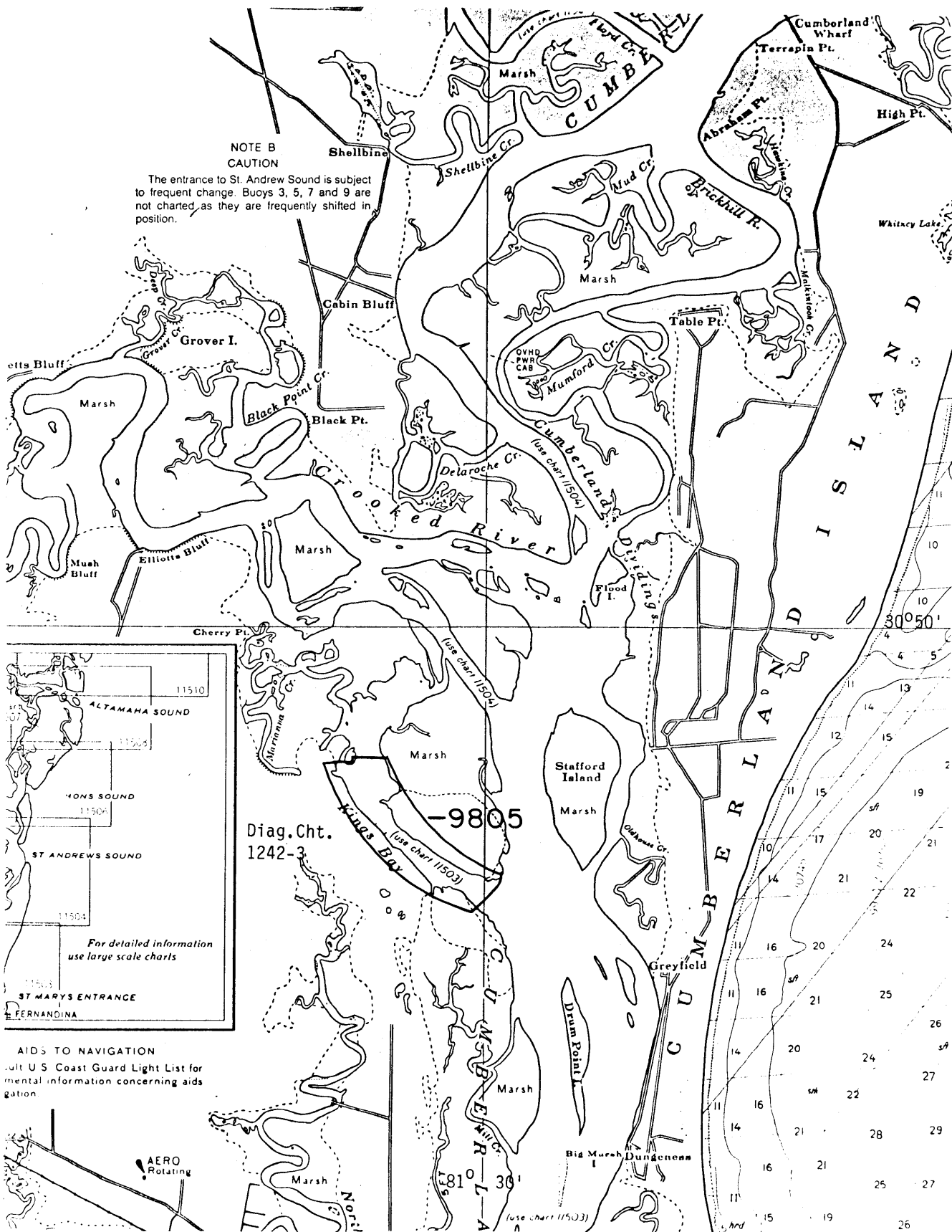
10TH ANNIVERSARY 1970-1980

National Oceanic and Atmospheric Administration

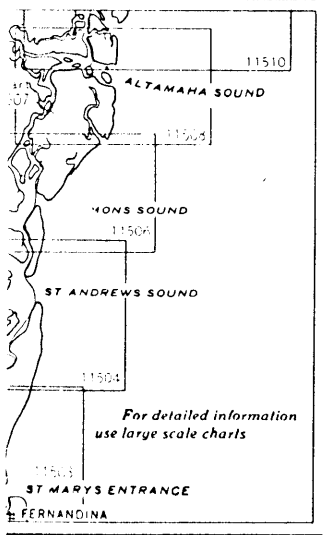
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**NOTE B
CAUTION**

The entrance to St. Andrew Sound is subject to frequent change. Buoys 3, 5, 7 and 9 are not charted, as they are frequently shifted in position.



Diag. Cht. 1242-3
-9805



For detailed information use large scale charts

AIDS TO NAVIGATION
Full U.S. Coast Guard Light List for supplemental information concerning aids to navigation

AERO Rotating

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. 9805

INSTRUCTIONS

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

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

CHART	DATE	CARTOGRAPHER	REMARKS <i>Quality Control</i>
11503	7/26/81	B. Fenwick	Full Part Before After Verification Review Inspection Signed Via <i>A</i> Drawing No.
11503	5/11/81		
11489	5/11/81	B. Fenwick	Full Part Before After Verification Review Inspection Signed Via <i>Quality Control</i> Drawing No.
11504 ¹¹	10/19/81	Powers	Full Part Before After Verification Review Inspection Signed Via <i>Quality Control</i> Drawing No. 14
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
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