10170

Diagram No. 1263-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ... Hydrographic

Field No. ... HFP-10-1-85

Registery No. ... H-10170

LOCALITY

State ... Florida

General Locality ... St. Andrew Bay

Sublocality ... East Entrance to St. Andrew Bay

1985

CHIEF OF PARTY
LCDR K.W. Perrin

LIBRARY & ARCHIVES

DATE ... February 4, 1987

☆U.S. GOV. PRINTING OFFICE: 1985—566-054

10170

16 hrs

ACPG
CHTS
11390 sc
11391
11389
11393 sc
11360

TO SIGN OFF SEE "RECORD OF APPLICATION"

NOAA FORM 77-28 (11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO.

H-10170

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.

HFP 10-1-85

State Florida

General locality ~~West Coast~~ St. Andrew Bay

Locality East Entrance to St Andrew Bay

Scale 1:10,000 Date of survey 19 Feb. to 7 May 1985

Instructions dated 15 August 1983 Project No. OPR-J264-HFP-83

Vessel Hydrographic Field Party 3, Launch 517, Zodiac 0031

Chief of party LCDR K. W. Perrin

Surveyed by LT F. W. Rossman

Soundings taken by echo sounder, hand lead, pole All

Graphic record scaled by F. Rossman, R. Snow, D. Elliott, J. Oswald & T. Rybarski

Graphic record checked by F. Rossmann & R. Snow

Verification by Processed by T. Jones Automated plot by PMC Xynetics Plotter

Evaluation by Verified by A. A. Luceno

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

REMARKS: Marginal notes in black by Evaluator. Separates are filed with the hydrographic data.

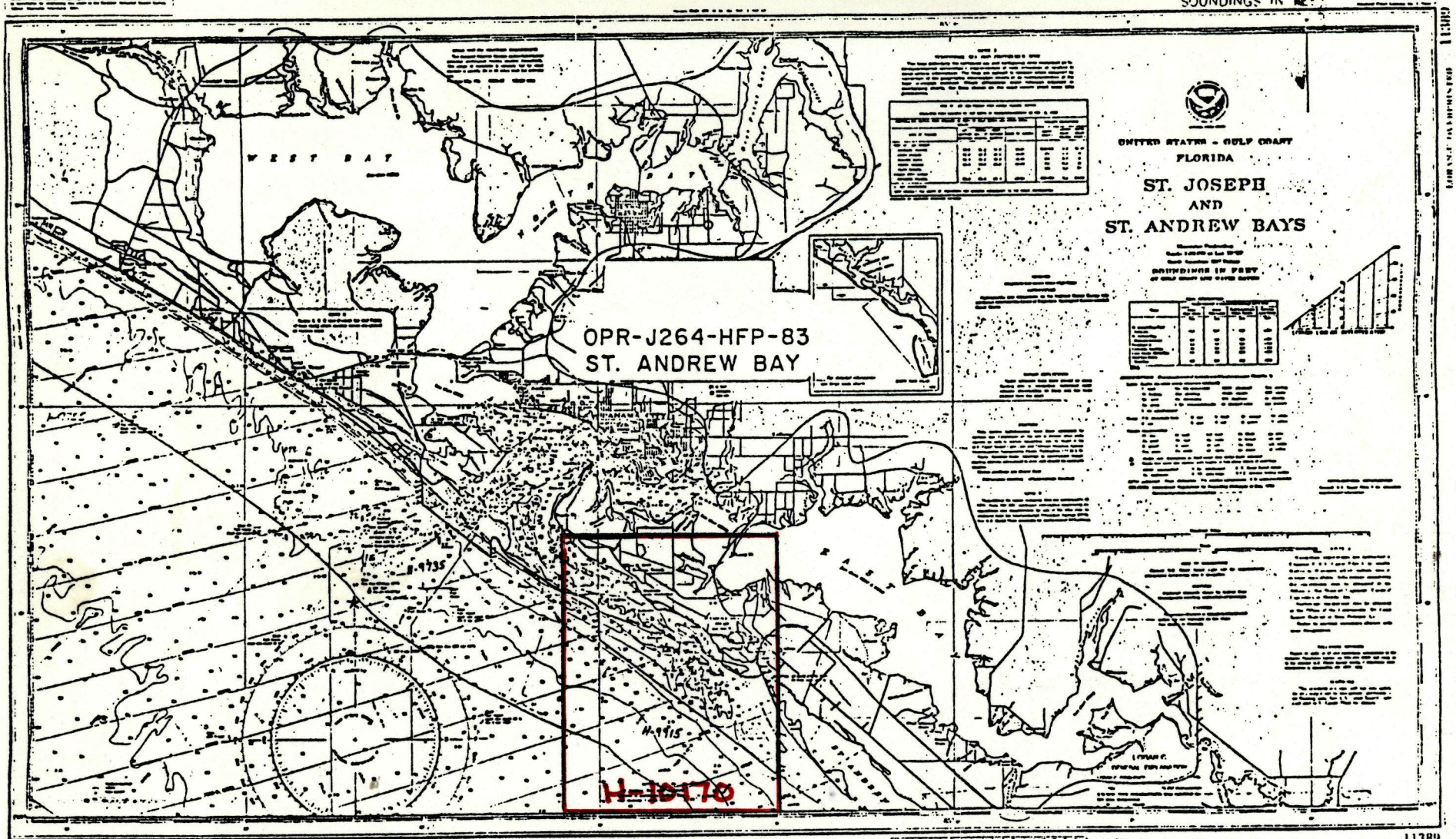
AWOIS/SURF 10/26/88 SJV

SC 4-

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1978-665-010-1174

SOUNDINGS IN FEET



SOUNDINGS IN FEET

(St. Joseph and St. Andrew Bays)

11389
LORAN-C OVERPRINTED

11389
LORAN-C OVERPRINTED

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10170
HFP 10-1-85

Scale 1:10,000
Chief of Party: Lt. Cdr. Kenneth W. Perrin
Officer-in-Charge: Lt. (jg) Frederick W. Rossmann
Hydrographic Field Parties Section, Hydrographic Field Party #3
Launch 0517 and 0031(Zodiac)

A. PROJECT

This survey was accomplished under Project Instructions OPR-J264-HFP-83, dated 15 August 1983, and amended by:

Change No. 1, 30 September 1983
Change No. 2, 18 October 1984
Change No. 3, 22 October 1984

B. AREA SURVEYED

The area surveyed was the Eastern Entrance to St. Andrew Bay, Florida and the approaches to the entrance in the Gulf of Mexico. The survey is bounded by the following points:

Lat. 30°07'00"N, Long. 85°41'00"W
Lat. 30°04'00"N, Long. 85°35'00"W
Lat. 30°01'00"N, Long. 85°35'00"W
Lat. 30°04'00"N, Long. 85°40'00"W
Lat. 30°05'00"N, Long. 85°40'00"W
Lat. 30°06'00"N, Long. 85°42'00"W.

This survey was conducted from 19 February 1985 to 7 May 1985 (JD 50 to 127) inclusive.

C. SOUNDING VESSEL

All soundings obtained on this survey were obtained from NOAA Launch 0517 (EDP#0517) or the thirteen foot inflatable Zodiac (EDP#0031) using a sounding pole. All survey records are annotated with the vessel number 0517 or 0031.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

A Raytheon 719C fathometer, serial number 5881, was used during the entire survey.

On 3 April 1985, JD 093, some skips were noted in the trace. On 4 April, JD 094, a different 719C fathometer was tested in Launch 0517 but showed the same skipping problem. A new transducer was checked using fathometer #5881 and the skips in the trace stopped. Launch 517 was removed from the water and a new transducer was mounted in the hull. The changing of the transducer eliminated the skipping problem. The skips in the trace on JD 093 were minor and did not affect the quality of the hydrography. This was the only problem encountered with the fathometer during the survey.

The fathometer was monitored continuously while sounding and was under constant adjustment to insure that no initial corrections were necessary.

Two settlement and squat tests were conducted on Launch 0517 from the pier at the National Marine Fisheries Laboratory, Panama City Beach, Florida (lat. 30°08'58.00"N, long. 85°42'45.00"W). The tests were run on 2 November 1984 and 4 April 1985. It was noted that the settlement and squat curve derived from the data of 2 November 1984 did not agree with the historical data for Launch 0517. The settlement and squat test ran on 4 April 1985 was done to check the accuracy of the test done on 2 November 1984. It was found that the earlier curve was in error above speeds of 1800 RPM. The error in the first curve was caused from the test being run in shallow water. Running in shallow water caused the shallow water effect to raise the boat higher out of the water. At speeds below 1800 RPM, the shallow water effect doesn't appear to effect Launch 0517. A hybrid settlement and squat curve was created using the data below 1800 RPM from the test of 2 November and the data from the 4 April test for 1800 RPM to 3000 RPM. The results of these tests and the various curves are included in the Appendix of this report. Settlement and squat corrections will be applied via the TC/TI tape during the plotting of the smooth sheet at the Pacific Marine Center. Settlement and squat corrections were not applied to the field sheets.

Velocity and instrument corrections were determined by bar checks. Thirty-two bar checks were taken when wind and sea conditions allowed accurate results. Two Velocity Tables were generated from the bar check data. Table 1 covers the period from JD 050 to 093. Table 2 covers the period from JD 098 through 127. Table 2 represents the differences caused by changing the transducers. Two Velocity Corrector Tapes are included with the survey data to be used during the smooth plotting of the survey by the Pacific Marine Center. Velocity corrections were not applied during the field processing of the data.

A draft correction of 1.2 feet has been applied to all soundings via the Electronic Corrector Tape. The draft corrector was checked when the transducer was changed and found to be accurate. Until the problem of smooth plotting the the final smooth sheet by either Marine Center is resolved, apply

draft corrector to the TC/TI tape (Pacific) or to the Electronic Corrector Tape (Atlantic), the field party will continue to use the Electronic Corrector Tape for applying the draft corrector. Application of the static draft corrector on the Electronic Corrector Tape is the only method for the field party to apply a draft correction to the soundings.

Soundings taken from the Zodiac (EDP#0031) are pole soundings and need only be corrected with real tides.

Tide corrections applied to the field sheets are based on predicted tides for Pensacola, Florida corrected for St. Andrew Bay, Florida. Smooth tides were requested from N/OMA123 on 14 May 1985 by N/MOA233. A copy of this request along with the Field Tide Note is contained in the Appendix of this report.

E. SURVEY SHEETS

The field sheets were prepared in the field using a PDP8/e computer and a DP-3 Complot plotter. A work sheet, semi-smooth field sheet, smooth field sheet, and an overlay sheet are included with this survey. Mainscheme hydrography and junction soundings are plotted on the smooth field sheet while crosslines, developments, bottom samples, and presurvey review items are shown on the overlay sheet. The projection parameter tape listing for the field sheets is included in the Appendix of this report. The final smooth sheet and verification of this survey will be accomplished at the ~~Atlantic~~ Pacific Marine Center.

F. CONTROL STATIONS

Control stations used during this survey were either existing geodetic control stations published by NGS or established by N/MOA2x1 to Third-order, Class I standards. All stations are referred to the North American 1927 Datum. A list of all control stations used during this survey is included in this ~~the Appendix of this~~ report.

Station PK TYNDALL was destroyed during the course of the survey. The pier on which the mark had been established was rebuilt. Needing a mark (PK TYNDALL ECC) in this area, the field party cut a triangle around a pitch knot in the new flooring on JD 123. This mark was trilaterated JD 129, 9 May 1985. The raw data for this trilateration is included with the survey data. No geographical position was determined for this point during the survey. The G.P. for this station (PK TYNDALL ECC) was computed after the survey was completed by N/MOA2x1 from data provided by the field party. The position for PK TYNDALL ECC is lat. 30°05'52.037"N, long. 85°39'15.266" W. The inverse distance between PK TYNDALL and PK TYNDALL ECC

is less than 0.5 meters. The temporary point, PK TYNDALL ECC, was used to control hydrography done on JD 123, the position for PK TYNDALL was used in the sounding volume and to plot all positional data obtained from the temporary point.

G. HYDROGRAPHIC POSITION CONTROL

The method used to control this survey was Range-Azimuth and Range-Range. Range-Azimuth was used inside St. Andrew Bay and along the majority of the shoreline. Range-Range was used offshore in the Gulf of Mexico for the approaches to the Eastern Entrance to St. Andrew Bay. The equipment used to control this survey was Del Norte distance measuring unit, 20 second theodolite or HP-3808A modified to turn horizontal angles. No unusual problems were encountered with the use of this equipment. ✓

The control equipment was calibrated by random baseline calibrations during the survey and daily calibration checks. Baseline calibrations were conducted between two Third-order horizontal control stations (NOAA and MUTH) with an inverse distance of 1636 meters. The baseline calibration forms are contained in the fanfolder with the survey data. Daily checks were made statically at a horizontal control station (PK TYNDALL) or at a calibration point established with the HP-3808A. The calibration point for this survey was at the end of the pier, lat. 30°04'35.13"N, long. 85°38'25.74"W. The daily calibrations on several occasions during the Range-Range portion of the survey had daily corrections of greater than five meters. The party continued to work with these calibrations because of the two day logistics involved in removing and replacing the stations. Baseline data obtained at the completion of the survey agrees with the daily correctors obtained from the daily calibration. Abstracts of all electronic equipment and correctors are contained in the Appendix of this report. ✓

correctors derived from daily calib. checks were used in the smooth sheet.

Ref in 1985

H. SHORELINE

Shoreline detail for this survey was obtained from TP-00343 and TP-00347 from JOB CM-7701. The Class I final review shoreline map, had registration pending when provided to the Hydrographic Field Party in 1983. The map was compiled at 1:20,000 scale. The map was enlarged to 1:10,000 scale photographically and the shoreline transferred directly to the field sheets. ✓

Shoreline corrections were necessary in the southeastern corner of the survey area. Lateral currents have moved a great volume of sand westward toward the eastern entrance to St. Andrew Bay. Much of this sand has been trapped by the eastern end of Shell Island causing an extension of the island. The shoreline east of Shell Island has (accreted) filled in 300 to 400 meters in some areas and has receded 100 to 200 meters in other areas ✓

along this portion of shoreline. A small island (sand bar) has also formed inside the eastern entrance to the bay at lat. 30°04'19" N, long. 85°37'18"W. The field party took detached positions along the shoreline where the changes were dramatic. These areas are shown in solid red on the smooth field sheet. The extreme southeastern corner of the survey is shown in solid red and was taken from the hydrography in this area. The party was unable to obtain ranges over 6000 meters with the HP3808A and two sets of prisms.

changes in shoreline with detached pos. taken shown in red solid line. shoreline without pos. taken shown in dashed red line in smooth sheet.

Another shoreline change is shown at lat. 30°05'25"N, long. 85°38'50"W where a new pier and breakwater have been added to the Tyndall Air Force Base Yacht Club. This area is shown as being "UNDER CONSTRUCTION" on the current chart. The Tyndall Yacht Club was contacted and reported that the construction was complete. The new pier is shown on the field sheet in black. The breakwater is shown in solid red and dashed red. The dashed red change represents an area where rock rip-rap has been added to the shoreline. The solid red line changes were verified by detached positions 685, 687, 688, and 689.

charts 11390 & 11391

✓

see PSR 3143 page 15

No other shoreline changes were noted during the survey. ✓

A check was made to determine if any recent aerial photographs of the Eastern Entrance to St. Andrew Bay were available. The Florida Department of Transportation had photographs of this area from 1983 that show the shoreline changes. Six photographs were obtained from the FDOT and are included with the survey data. ✓

Photogrammetric locations of salient features from the manuscript were checked during hydrography (Range-Azimuth) with the following results and recommendations:

a) The piling, lat. 30°06'01"N, long. 85°39'32"W, were not found. A submerged mooring, constructed of a steel sand anchor was located in the vicinity (Pos 207, lat. 30°05'59.55"N, long. 85°39'31.29"W). The hydrographer recommends that the mooring be charted as an obstruction, submerged pipe. ✓ chart as obstr awash.

b) The pier, lat. 30°04'36"N, long. 85°38'28"W, was not found. This pier, from the T-Sheet, should not be plotted. A pier was located east of the pier shown on the T-Sheet (Pos 675, lat. 30°04'35.13"N, long. 85°38'25.74"W). This pier should be charted. ✓ concur

do not concur. T-sheet pier plotted as subm. pier ruins on smooth sheet.

c) L shaped pier on Shell Island was verified by positions 597 and 598. This pier should remain charted. concur

Pos. 597:
ϕ = 30°05'37.28"N
λ = 85°41'04.76"W

Pos 598:
ϕ = 30°05'36.76"N
λ = 85°41'04.02"W

d) The finger pier at Beacon Beach was verified by position 205. This pier should remain charted. concur

Pos. 205:
ϕ = 30°05'51.85"N
λ = 85°39'15.35"W

I. CROSSLINES

Crosslines constitute 9.5% of the mainscheme hydrography. A total of 125 crossings were checked. Of these 54% were in exact agreement and 96% in agreement by ± 1 foot. The remaining 4% of the comparison soundings were in agreement by ±2 feet. This ±2 feet disagreement was noted between soundings taken on different days and in areas where the contour was changing rapidly. The majority of the crossings show excellent agreement.

J. JUNCTIONS

This survey junctions with the following two surveys:

1. H-10122, to the west inside St. Andrew Bay;
2. H-9915, to the south in the Gulf of Mexico.

Agreement with H-10122 and this survey is excellent, agreement to ±1 foot or less. The contours can be drawn continuous between the two surveys.

Agreement with H-9915 and this survey varies from excellent to good. This survey junctions with H-9915 in the Gulf of Mexico at the 18-foot contour between longitudes 85°35'W and 85°40'W. Soundings east of longitude 85°37'W generally disagree by one to two feet with the soundings from the current survey being shallower. This difference may be caused by several factors:

1) Slight differences between actual and predicted tides.

2) Velocity correctors were not applied during field processing of the survey.

3) Sediment transport, lateral currents and severe weather may have shifted this sandy bottom since H-9915 was completed.

Items 1 and 2 should be revised by the application of smooth tides and velocity correctors during smooth plotting by the Marine Center. If the smooth tides and velocity correctors do not resolve the difference, then the area is shoaling due to sediment transfer. The 18-foot contour should be drawn from the current survey in the junction area east of longitude 85°37'W. West of longitude 85°37'W, soundings are in excellent agreement, varying from exact to ±1 foot. The 18 foot contour can be drawn continuous between the two surveys in this area west of longitude 85°37'W.

soundings agree to within 1-foot after reducing for actual tides

K. COMPARISON WITH PRIOR SURVEYS

see sect. 6 of Eval. Report for further discussion.

This survey was previously covered by the following surveys:

1. H-1375 (1877), 1:20,000 scale
2. H-5024 (1930), 1:10,000 scale
3. H-7173 (1946-1947), 1:10,000 scale

H-1375

A general comparison was made between this prior survey and the current survey. The prior survey is not adjusted to the North American 1927 datum. Soundings range from good agreement to no agreement. The eastern entrance has changed dramatically. The soundings from the current survey, in the entrance, are much shallower than those of H-1375. The controlling depth in the entrance from H-1375 was 16.5 feet compared to the four feet from the current survey. The sandy shoreline is in total disagreement between the two surveys. Several (3) areas marked "BREAKERS" are found on the prior survey. Breakers are found on the current survey but not in the same location as the prior. Other than the breakers, no dangers to navigation are noted on the prior survey.

H-5024

The western portion of the surveys of the north of Shell Island and west of long. 85°40'W shows good agreement between soundings and the six-, twelve-, and eighteen-foot contour. Soundings in this area are generally in agreement by ±2 feet. East of long. 85°40'W, the agreement between soundings varies from good agreement, ±2 feet, to no agreement. A considerable amount of the shoreline east of long. 85°40'W has changed since 1930. Two islands, Hurricane Island and an unnamed island, (Last Island) have become part of Shell Island. The entrance between these islands have been closed by shifting sand. Evidence of the entrance between Shell and Hurricane Island can still be seen in the shoreline soundings, position 5236-5250. The eastern entrance to the bay on the prior survey is now part of a sand bar that extends eastward from the mapped shoreline (TP-00347) of Shell Island. This prior entrance channel below latitude 30°04'30"N no longer exists. The bottom contour in the Gulf of Mexico, around the eastern entrance, has also changed. There is no agreement between soundings of the two surveys in the Gulf of Mexico. The hydrographer recommends that the soundings from the present survey supersede the prior survey's soundings.

Several items are noted on H-5024:

1) A triangulation station, WRECK 1930, appears to be related to the wreck positioned during the survey, positions 1917 and 1918. This is a PSR item. (See #3141, COMPARISON WITH THE CHART)

same item as i page 15

2) A pipe on the prior survey, lat. 30°04'06"N, long. 85°37'54"W, was not found on the current survey. The hydrographer recommends that this pipe be deleted from the chart. (No pipe on prior at this position)

3) A pipe was located on the prior survey at lat. 30°04'24"N, long. 85°38'18"W. This area is now covered with sand and part of Shell Island. (See PSR #3146) considered disproven.

Same as item 5 page 11.

4) A pipe, lat. 30°04'03"N, long. 85°37'25"W, was not located during the survey. Water depth from the current survey in this area shallow, one foot or less. This pipe should not be charted. (See PSR #3147)

Do not concur. Insufficient investigation. carried forward from H-7173.

item 2 page 11 & same item page 16

5) No evidence of the Front Bar Range 1930, lat. 30°04'03"N, long. 85°37'30"W, was found during the current survey. Water depth in this area is two feet or less. This item should not be charted.

considered disproven by H-7173.

6) Position 690 appears to be the remains of Rear Bar Range 1930 noted on the prior survey. lat 30°04'34.2"N long 85°37'24.0W

See smooth sheet for obstr. visible at HW.

7) No evidence of the piling, lat. 30°04'34"N, long. 85°37'19"W, was noted during the current survey. Water depth in this area is now five feet.

considered disproven by H-7173.

8) No evidence of the Bay Front Range 1930, lat. 30°05'16"N, long. 85°38'40"W, was found during the current survey.

Insufficient investigation, carried forward from H-7173.

9) No evidence of Front Cut Range 1930, lat. 30° 05'35"N, long. 85°39'02"W, was noted during the current survey.

considered disproven by H-7173.

10) Position 204 appears to be the remains of the Rear Cut Range 1930. (See same item page 17)

See smooth sheet for obstr. vis at HW. lat. 30°05'46.3"N long. 85°39' 11.3 W

11) No evidence of the pile, lat. 30°05'41"N, long. 85°39'06"W, was observed during the current survey.

Considered disproven by H-7173.

12) No evidence of the pile, lat. 30°06'14"N, long. 85°40'12"W, was observed during the current survey.

Insufficient investigation for disproval. carried forward from H-7173.

13) No evidence of the pier ruins, lat. 30°05'50"N, long. 85°41'17"W, was observed during the current survey.

considered disproven by H-7173.

14) Position 595 is the offshore end of a double row of pilings, charted as a pier on the prior survey at lat. 30°05'08" N, long. 85°41'08"W.

chart as obstr. (piles subm. pier ruins)

38" SPL

(Same as item 10 page 12)

H-10170

H-7173

This prior survey encompasses the current survey from long. 85°37'W to a line drawn between lat. 30°06.5'N, long. 85°40.5'W and lat. 30°06.0'N, long. 85°42.0'W. In St. Andrew Bay west of long. 85°39'W, the two surveys are in good agreement. Soundings run from exact agreement to ±1 foot in general, with only minor changes noted in the six-, twelve-, eighteen-, and thirty-foot contours. East of long. 85°39'W, the soundings range from good agreement to no agreement. A sand spit has built up on the eastern end of Shell Island (Hurricane Island on the prior survey) between long. 85°39'W and 85°37.5'W. The eastern end of this spit has filled the old eastern channel into the bay. A small island and sand shoal have built up in the area around lat. 30°04.3'N, long. 85°37.3' W in an area were the depths previously ran from eight to fifteen feet. In the Gulf of Mexico portion of the current survey there is no general agreement between soundings. Little evidence remains of the old eastern entrance channel found on the prior survey. In areas were the depths were over 30 feet on the prior survey the current survey shows five feet. The 12 and 18 foot contour have moved shoreward from those contours found on the prior survey. The extreme offshore soundings from the current survey does show a ±1 to ±2 foot agreement with the soundings on the prior survey. The hydrographer recommends that the soundings for the current survey supersede the prior survey for charting in common areas.

Several man-made features and possible dangers to navigation were shown on the prior survey. Working east to west through the survey area these items are:

1) Partially submerged wreck at lat. 30°03'14"N, long. 85°37'18"W was located during the current survey. (See PSR #3141, COMPARISON WITH THE CHART) see same item page 15.

2) Submerged pipe at lat. 30°04'02"N, long. 85°37'45"W was searched for and not found during the current survey. (See PSR #3147) (see item 4 for H-5024 previous page. Same item)

3) The remains of the old front range, lat. 30°04' 08"N, long. 85°37'29"W, are now on the sand spit of Shell Island. (Position 1737) See same item page 16.

4) Rear Bar Range at lat. 30°04'35"N, long. 85°37'24"W on the prior survey was located during the current survey. (See PSR #3142) (same item on pg. 15) See smooth sheet for obstr. vis HW.

5) A pipe at lat. 30°04'24"N, long. 85°38'18" W on the prior survey was not searched for during the current survey because this position is now part of Shell Island. (See PSR #3146) considered disproven. (Same as item 3 previous page # sect. L page 16)

6) Front Bay Range, 1930-1935, at lat. 30°05'16"N, long. 85°38'40"W on the prior survey was not observed on the current survey. ✓ Insufficient investigation. carried forward.

7) Rear Cut Range, 1930-1935, at lat. 30°05'~~16~~"N, long. 85°39'11"W was located during the current survey (See Position 206). The range is in ruins with only the four legs remaining. See same item page 17.

8) The stump of a piling flush with the bottom was found in the area of the reported pile, lat. 30°05'~~47~~"N, long. 85°39'09"W, on the prior survey. (See position #5297) ✓

9) No evidence of the following piling shown on the prior survey was found during the current survey: ✓

* a) Lat. 30°05'53"N, Long. 85°39'22"W
b) Lat. 30°05'57"N, Long. 85°39'28"W
c) Lat. 30°05'58"N, Long. 85°39'30"W
d) Lat. 30°06'13"N, Long. 85°40'13"W

10) Pier ruins were located 30 meters west of the pier ruins shown on the prior survey at lat. 30°05'~~08~~"N, long. 85°41'~~12~~"W. (See Position 595) See item 14 page 10

This ends the comparisons with the prior surveys. Due to the dramatic changes between the current and prior surveys the hydrographer recommends that the current survey's soundings supersede all prior survey soundings for charting in the common areas.

* Insufficient investigation. Carried forward.

L. COMPARISON WITH THE CHART

The chart comparison for this survey was made with the 15th edition of Chart 11391, dated 29 October 1983. For the comparison the 1:25,000 scale chart was photographically enlarged to 1:10,000 scale.

Soundings in the western portion of the survey inside St. Andrew Bay show good agreement, ranging from exact to ±1 foot, from the western end of the current survey to long. 85°38.5'W. The charted shoal running between lat. 30°06'25"N, long. 85°41'11"W to lat. 30°05'41"N, long. 85°39'41"W is still present with a least depth of four feet on the western end and an average depth varying from five to six feet along its length. The six- and twelve-foot contours are in good agreement west of long. 85°38.5'W. The 18-foot contour shows a major shift at lat. 30°05'30"N, long. 85°40'18"W. ✓

East of long. 85°38.5'W the agreement between soundings begins to break down. This area east of long. 85°38.5'W extending into the Gulf of Mexico has changed dramatically since the last survey. The shoreline and the depth contours have changed. A small island has built up at lat. 30°04'19"N, long. 85°37'18"W. The shoreline east of long. 85°37.0'W has changed, filling in some areas while eroding in others. In the Gulf of Mexico the 12- and 18-foot contours have moved shoreward. Some general agreement is found in the extreme offshore section of the current survey in water depths of 19 to 21 feet.

Three areas of breakers are noted on the current survey. These areas break under all weather conditions. The areas are centered at the following points:

transferred to the smooth sheet from the field sheet.

a) Lat. 30°04'03"N, Long. 85°37'40"W
b) Lat. 30°03'54"N, Long. 85°37'25"W
c) Lat. 30°03'41"N, Long. 85°36'53"W

The charted eastern entrance to St. Andrew Bay no longer exists. The sand spit that has built on the eastern end of Shell Island extends into the old channel. This sand spit has built southeast from the charted shoreline for 0.75 nautical miles. A stretch of deep water, eight to ten feet, runs from lat. 30°04'16"N, long. 85°37'25"W to lat. 30°03'35"N, long. 85°37'05"W. North of this stretch of deep water is a shoal extending from the small island at lat. 30°04'19"N, long. 85°37'18"W to lat. 30°03'50"N, long. 85°37'00"W. The southern portion of this deep water stretch terminates in the Gulf of Mexico at the area that has shoaled between Shell Island, to the west, and the shoreline to the east. Controlling depth across this shoal is four feet. The hydrographer recommends:

1) That the note "St. Andrew Bay East Entrance Channel is constantly shifting. Use new channel 7 miles NW." be carried over to the new chart.

2) As soon as possible, a chartlet should be sent to Commander, Eighth Coast Guard District for chart 11390 and 11391 showing the change to the eastern entrance to be included in the Notice to Mariners.

copy of chartlet sent to Coast Guard included with this report.

A Notice to Mariners was sent to the Eighth Coast Guard district by the field party stating the controlling depth into the eastern entrance is four feet. A copy of the letter is appended to this report.

Numerous shoals/sand bars are located between the shoreline and 12 foot contour in the Gulf of Mexico.

Along the Gulf of Mexico shore the water drops rapidly from the shoreline to two or three feet. Numerous times the

8/24/87

When the new
11391 is on
the street I'll
drop a letter
to USCG, on
"A" JC Shillings

bow would be on shore while the stern was in two to three feet of water. This situation made it very difficult to get a zero curve along the Gulf coast shoreline.

Portions of the survey area are in Restricted Area, 204.120 (U.S. Coast Pilot). These areas are the impact area for the Tyndall Air Force Base small arms range and drone launching area. The Restricted Area note and boundaries should be transferred to the new chart. ✓

COLREGS Demarcation Line 80.810C at lat. 30°03'18"N, long. 85°35'18"W is now on land, the charted area has filled with sand. This COLREGS should be revised. ✓

COLREGS Demarcation Line 80.810d should be revised because of the sand spit that has built up on Shell Island.

11 cr A

There are three stacks charted at:

a) Lat. 30°04'12.90" N, Long. 85°35'23.80" W
b) Lat. 30°04'05.40" N, Long. 85°35'56.40" W
c) Lat. 30°04'19.40" N, Long. 85°36'27.40" W

These stacks were not visible during the survey. The hydrographer recommends that these charted landmarks be deleted from Chart 11389 and 11391. A NOAA Form 76-40 noting these deletions is appended to this report. concur

The following PSR items were investigated during the survey:

PSR #3138: An obstruction, lat. 30°05'54.00"N, long. 85°39'24.00"W, from H-5024 CL1813/76--CAS, 11391, OPR-511-PE-76. The piling were verified visually as charted in 1976. Due to the shallow depth of the area and the water clarity no chain drag was done on this item during the survey. A visual search was run between the shoreline and the six-foot contour on a calm day with excellent water clarity, five feet. Several items were observed on this day. The remains of an old range tower (position 204) was present and represents a danger to navigation. This item is charted as a pile on the current chart. The remains of piles that have rotted and are flush with the bottom were observed but not D.P.ed. These piles were later positioned to be used to disprove the charted piles. Positions 5294, 5295, 5296 and 5297 are the remains of piling flush with the bottom. This positions are for disproval of the charted piles and should not be charted. ✓ for pos. 5297, See item 8 pages 12 & 13 this report.

PSR #3140: An obstruction, lat. 30°05'00.00"N, long. 85°39'00.00"W, from CL 1813/76--CAS 11391, OPR-511-PE-76. Two piles remained above chart datum in 1976. This item was searched for and found on JD 064, position 674. Six submerged,

eight-inch diameter, wooden piles make up this item. The least depth over the piles is 2.8 feet. The hydrographer recommends that this area be dashed foul as shown on the field sheet. The detached position is lat. 30°04'59.18"N, long. 85°38'58.85"W. *Insufficient documentation of search. Other piles may remain undetected.*

No foulline shown on field sheet

PSR #3141: A sunken wreck, lat. 30°03'14.00"N, long. 85°37'18.00"W, from CL1813/76--CAS 11391, OPR-511-PE-76. The wreck was located on JD 107, position 1917 and 1918 (lat. 30°03'12.16"N, long. 85°37'17.95"W and lat. 30°03'12.96"N, long. 85°37'17.76"W). The wreck is a locally known diving and fishing site. The wreck is a tug boat sitting upright on the bottom. The stack of the wreck comes to within ~~five~~ 4 feet of the surface (measurement taken with sounding pole). Water visibility was eight to ten feet when the wreck was investigated. No diving investigation was done, Survey Tech Rybarski did snorkel over the wreck and identified the stack as the highest point on the wreck. The hydrographer recommends that this item remain charted and the charted position be revised to the new position obtained during the survey.

reduces to 4 feet at MLLW.

concur.

PSR #3142: An obstruction, lat. 30°04'34.05"N, long. 85°37'23.94"W, from CL 1813/76--CAS 11391, OPR-511-PE-76. The obstruction is a four legged piling structure. This item was positioned on JD 064, position 690. The item is the remains of the REAR BAR RANGE. The four wooden legs are anchored in concrete casings. The tower stands ~~20~~ 19 feet above the water surface. Using the detached position, lat. 30°04'34.16"N, long. 85°37'23.~~85~~96"W, as the center, the piling encompass an area 20 feet by 20 feet. The hydrographer recommends that the charted "PILING" be changed to "PILES" and remain charted.

chart as obstr vis. MHW (abandoned range tower)

PSR #3143: An obstruction, lat. 30°05'30.00"N, long. 85°38'54.00"W, from CL 1813/76--CAS 11391, OPR-511-PE-76. The obstruction was a breakwater under construction. Tyndall Air Force Base Yacht Club was contacted and reported that the construction was complete. Along with the breakwater, a new pier has been constructed. The new breakwater is shown on the field sheet in red ink. The new pier is in black ink. *(on field sheet)* Positions 684 and 685, lat. 30°05'29.~~62~~56"N, long. 85°38'54.2~~5~~3"W and lat. 30°05'25.~~76~~69"N, long. 85°38'51.7~~4~~3"W, are the charted "BREAKWATER UNDER CONSTRUCTION" on the western side of the new marina area which is now completed. Position 686, lat. 30°05'25.6~~8~~1"N, long. 85°38'49.9~~2~~0"W, is the eastern most offshore end of the newly constructed pier. Position 687 and 688, lat. 30°05'24.5~~8~~7"N, long. 85°38'49.5~~7~~5"W and lat. 30°05'22.96"N, long. 85°38'48.0~~7~~6"W, is a newly constructed breakwater on the eastern side of the new marina area. Additional rock rip-rap extends from position 688 to position 689, lat. 30°05'21.~~20~~13"N, long. 85°38'46.8~~2~~1"W. The hydrographer recommends that the new marina area be transferred as shown on the field sheet to the chart. Additionally, the hydrographer recommends that the old marina area, lat. 30°05'32"N, long. 85°38'54"W, directly west of the new area be changed to agree with the T-Sheet. The charted area of the old marina does not agree with the T-Sheet or the current survey.

chart according to survey.

see 2nd paragraph page 7

PSR #3146: An obstruction, lat. 30°04'24.00" N, long. 85°38'18.00" W, from CL 1813/76--CAS 11391, OPR-511-PE-76. The obstruction is a pipe. This item was not investigated during the current survey because the given location is now part of the Shell Island. The hydrographer recommends that this item be deleted from the chart. considered disproven. (see item 5 page 11) & item 3 page 10)

PSR #3147: An obstruction, lat. 30°04'03.00" N, long. 85°37'44.50" W, from H-5024, H-7173 CL 519777--CGAUX. The chart letter addresses a submerged pile, however the chart and prior survey shows the item as a submerged pipe. An attempt was made to chain drag on JD 115, positions 2140-2163. Nothing was hung during the chain drag. The chain drag was only partially completed due to the shallowness of the water and the presence of breakers on the eastern end of the sweep area. The location of this item is now just offshore of the sand spit that has built up on the eastern end of Shell Island. No evidence of the pipe was observed visually inshore of the sweep area. The hydrographer recommends that this item be deleted from the chart or if charted listed as "ED". Do not concur. Same item as item 4 sect. K & item 2 page 11.

There are several other charted items that are not PSR items:

ITEM	Charted Position	Survey Pos. No., Lat. and Long.		Charting Recommendation	
Piling	30°04.13'N, 85°37.48'W	1737		Delete	concur. See item 3 page 11.
Pier	30°04.57'N, 85°38.45'W	675	30°04'35.13"N 85°38'25.74"W	Chart	concur See item 4 page 7
Pier Ruins	30°04.60'N, 85°38.53'W	NONE		Delete	Do not concur. Insufficient documentation of search. Retain as charted.
Pier	30°05.57'N, 85°41.09'W	597	30°05'37.27"N 85°41'04.73"W	Remain As Charted	see item c page 7
		598	30°05'36.94"N 85°41'03.99"W		
Pier Ruins	30°05.60'N, 85°41.14'W	595	30°05'38.50"N 85°41'07.29"W	Remain As Charted	See item 10 page 12. & item 14 page 10
		~~596~~ 596	30°05'36.76"N 85°41'08.33"W		
Sunken Wreck	NONE	208	30°06'25.39"N 85°40'28.84"W	Chart	Concur
Sub Pile	30°06.22'N, 85°40.20'W	NONE		Delete	Do not concur See item 12 page 10 & item 9 page 12
Pier Ruins	30°05.97'N, 85°39.55'W	NONE		Delete	Do not concur Transferred from 7173
Sub Mooring	NONE	207	30°05'59.53"N 85°39'31.32"W	Chart As Sub Pipe	See item 2 page 7
Pier	30°05.99'N, 85°39.52'W	NONE		Delete	Retain as charted
Pier	30°05.97'N, 85°39.48'W	NONE		Delete	Do not concur Transferred from 5024
Sub Pile	30°05.96'N, 85°39.49'W	NONE		Delete	Do not concur See item 9, page 12

ITEM	Charted Position	Survey Pos. No., Lat. and Long.		Charting Recommendation
Pier Ruin & Pile	30°05.96'N, 85°39.46'W	NONE		Delete
Pier	30°05.90'N, 85°39.33'W	NONE		Delete
Pipes	NONE	206	30°05'52.55"N 85°39'15.80"W	Chart As ~~Pipe~~
Pier	30°05.88'N, 85°39.25'W	205	30°05'51.83"N 85°39'15.38"W	Pier
Sub Pile	30°05.86'N, 85°39.25'W	NONE		Delete
Pile	30°05.78'N, 85°39.19'W	204	30°05'46.30"N 85°39'11.38"W	~~Piles~~
Pile	30°05.80'N, 85°39.15'W	5297		Do Not Chart
Pier	30°05.79'N, 85°39.09'W	NONE		Delete
Piling	NONE	5296		Do Not Chart
Pier	30°05.66'N, 85°39.04'W	NONE		Delete
Piling	NONE	5295		Do Not Chart
Piling	NONE	5294		Do Not Chart

Positions 5294, 5295, 5296 and 5297 are the remains of wooden pilings. These pilings have rotted and are now flush with the bottom. Position 5294, 5295, 5296 and 5297 should not be smooth plotted.

M. ADEQUACY OF SURVEY

This survey is complete and adequate to warrant its use to supersede prior surveys for charting in the common areas.

N. AIDS TO NAVIGATION

There are no aids to navigation in this survey area. No aids need to be established.

There are no bridges or overhead cables in the survey area.

O. STATISTICS

Number of positions	~~2616~~ 2565
Nautical miles of sounding line	156.1
Nautical miles of crossline	14.8
Nautical miles of development	53.6
Nautical miles of chain drag	4.0
Total miles of hydrography	228.5

Number of bottom samples..... 77
Number of bar checks..... 32
Number of detached position..... ~~181~~ 263

P. MISCELLANEOUS

Chart 11393 and 11390 have no common junction in the grid formed by 30°02'N, 30°04'N, 85°34'W and 85°36'W. The shoreline between these two charts is not continuous. ✓

Several areas of the survey were hand transferred from the overlay sheet to show these areas were not holidays. Additional soundings for these areas are contained on the overlay sheet for the survey. ✓

It was noted when these soundings were hand transferred from the semi-smooth field sheet that they did not agree with the final field smooth sheet. The soundings have shifted slightly between the semi-smooth and final field smooth sheet. This shift may have been caused by two different party members plotting the data at different days. This difference may also come from changes in the electronic correctors once a baseline was completed for that section of the survey work. No problem on smooth sheet

Position 2271-2291 is a chain drag for a spike observed between sounding lines on JD 63 between positions 520 and 521, which are the end and beginning of lines. Nothing was hung during the chain drag. A review of the fathogram from JD 127 showed no similar feature to that observed on JD 63. This chain drag should not be smooth plotted. Lat 30° 06' 09"N Long 85° 40' 23"W

Positions 1761-1764 and 1896-1916 were rejected and not reused. ✓

Work done on JD 86 was rejected due to a bad initial angle. The position numbers used that day were reused. ✓

Pole soundings constituted the majority of the work done on JD 119, 121, and 123. ✓

The Coast Pilot was reviewed for this area, no changes are needed. ✓

No information was obtained on currents in the survey area by the field party. ✓

Q. RECOMMENDATIONS

See Sections F, H, J, K, and L for specific recommendations. See Sect 9 of Eval Rpt

R. AUTOMATED DATA PROCESSING

Programs used during field data acquisition and field processing of this survey are as follows:

PROGRAM	DESCRIPTION	VERSION DATE
RK201	Grid, Signal, and Lattice Plot	4/18/75
RK211	Range/Range Non-Real Time Plot	1/15/76
RK212	Visual Station Table Load	4/01/74
RK216	Range/Azimuth Non-Real Time Plot	2/05/76
RK300	Utility Computations	2/05/76
RK330	Reformat and Data Check	5/04/76
RK407	Geodetic Inverse/Direct Computation	9/25/78
AM500	Predicted Tide Generator	11/10/72
AM602	Elinore-Line Oriented Editor	5/20/75

Note: The field party is still using the older version of RK216. The new version will not plot by limits from one day to the next without restarting the program.

S. REFERENCES TO REPORTS

Control Report for OPR-J264, dated 1984.

Respectfully submitted,

for Frederick W. Rossmann
LT. (jg), NOAA
OIC, HFP-3

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Hydrographic Field Party Three
439 W. York St.
Norfolk, Va. 23510

Date : 10 May 1985 Reply to Attn. of:

To : Commander, Eightht Coast Guard District

From : OIC HFP-3 Frederick W. Lorsman LTJG. NOAA.

Subject: Local Notice to Mariners

The following danger to navigation should be included in the Local Notice To Mariners:

Shoaling has occurred in the eastern entrance to St. Andrew Bay, Florida (30°03.5'N, 85°37.0'W). The control depth in this area is 4 feet.

This information effects charts 11390 and 11391.

This is preliminary data from hydrographic survey, H-10170, conducted under Project Instructions OPR-J264 during February and May 1985. This information is subject to final office review.

This information was provided to Mr. Wachter, Marine Information Specialist, at the New Orleans-office via phone on 10 May 1985.

Atlantic Marine Center
Hydrographic Field Parties Section

May 17, 1985 N/MOA233:KWP

TO: Commander, Eight Coast Guard District

FROM: N/MOA233 - Kenneth W. Perrin

SUBJECT: Supplement to Local Notice to Mariners

REF: Local Notice to Mariners, Lt. (jg) Frederick Rossmann, dated 10 May 1985.

The following information is being submitted to supplement that included in the letter from Lt. (jg) Frederick W. Rossmann, OIC, NOAA, HFP-3, dated 10 May 1985.

After examining the preliminary field sheet in the Hydrographic Field Parties Section Office it is believed a more significant change in charted depths occurs at lat. 30°03.9′, lon. 85°37.4′. The area of charted 12 to 16 ft. depths at this location is presently awash at MLLW.

This area is extremely hazardous and should not be navigated. Strict adherence to Note C on chart 11391 is urged. Attached is a copy of a section of the preliminary field sheet covering the Eastern Entrance.

Attachment

cc:
NOAA N/CG222
N/CG24
N/MOA2x1

FILE COPY

FILE COPY

CODE	SURNAME	DATE	CODE	SURNAME	DATE

NOAA FORM 61-2

Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102-3767

DEC 24 1986

N/MOP211C/CRD

Commander (OAN)
Eighth Coast Guard District
Hale Boggs Federal Building
500 Camp Street
New Orleans, Louisiana 70130

Dear Sir:

During office review of hydrographic survey H-10170, St. Andrew Bay, West Coast, Florida, the following change affecting charts 11390 and 11391 was noted. Questions concerning the survey may be directed to Cdr. Thomas W. Richards, Chief, Nautical Chart Branch, telephone (206) 526-6835.

The following statement is recommended for inclusion in the Local Notice to Mariners:

> "Shoaling has occurred in the eastern entrance to St. Andrew Bay, Florida (latitude 30°03.5'N, longitude 85°37.0'W). A significant change in the charted high waterline and depths has occurred. This area is extremely hazardous and should not be navigated. It is recommended that mariners use the new channel 7 miles northwest. Enclosed is a chartlet of the eastern entrance showing revised data".

Sincerely,

Original Signed By

Robert L. Sandquist
Rear Admiral, NOAA
Director, Pacific Marine Center

Enclosure

JSG
RLS
DH

CODE	SURNAME	DATE	CODE	SURNAME	DATE
N/MOP21	Richards TWR	12/24	N/MOP	Sandquist RLS	12/24
N/MOP2	Mordock JBM	12/24			
N/MOPx1	Austin				

NOAA FORM 61-2

FILE COPY

* U.S. GPO: 1985-567-601

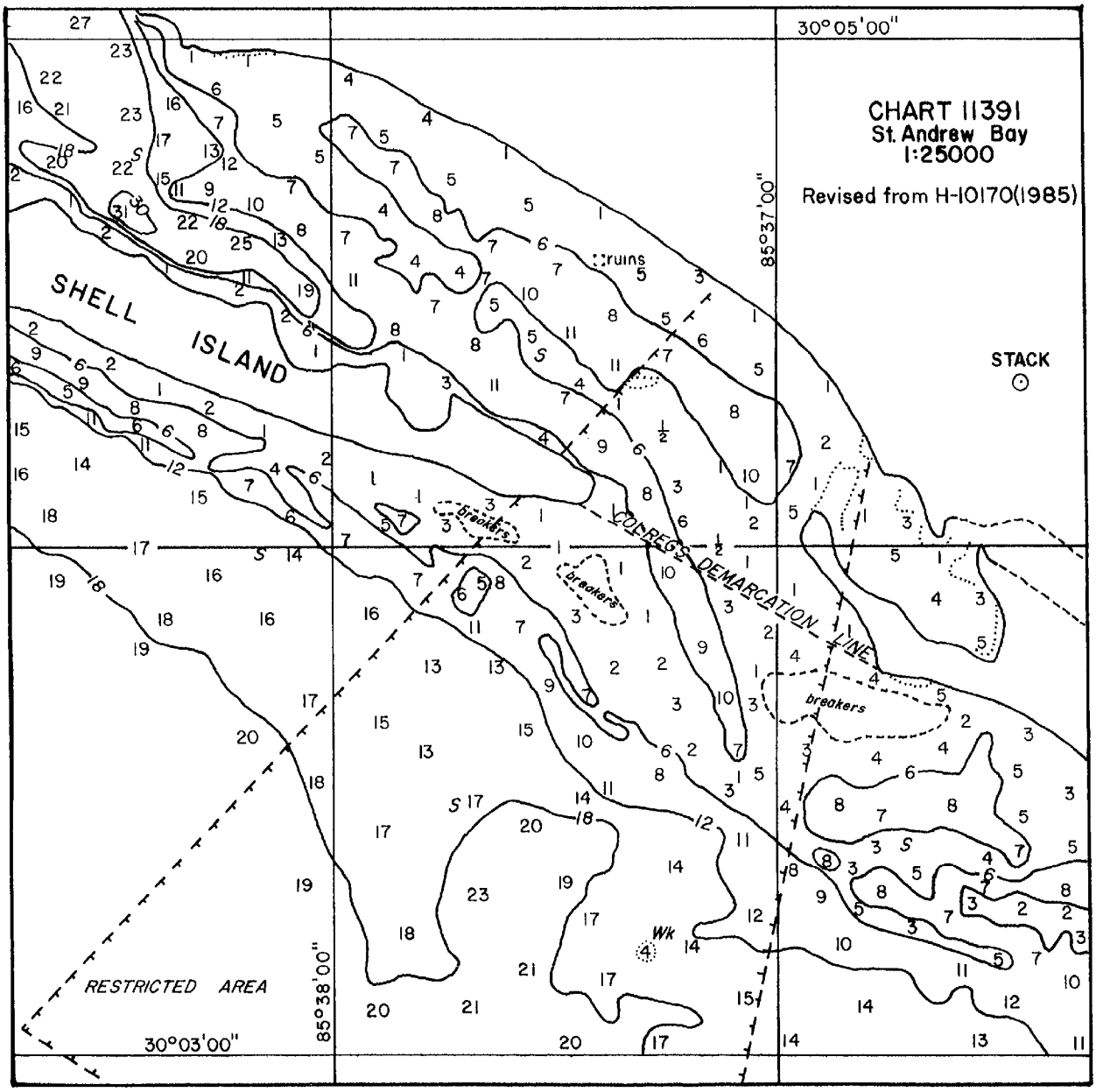


CHART 11391
St. Andrew Bay
1:25000
Revised from H-10170(1985)
30°05'00"
85°37'00"
85°38'00"
30°03'00"
SHELL ISLAND
STACK
ruins
breakers
breakers
breakers
COLREGS DEMARCATION LINE
RESTRICTED AREA
Wk

FIELD TIDE NOTE
SURVEY H-10170

Field tide reduction of soundings was based on predicted tides from Pensacola, Florida corrected to St. Andrew Bay, Florida, and were interpolated by a PDP8/e computer utilizing AM500.

The project instructions states in Section 5.9 that prediction stations number 3155 through 3169 found in Table 2 of the Tide Tables should be used to provide preliminary time and height corrections to the predicted tide at Penscola. A detailed chartlet of these zones was provide by N/OMS12 in February 1984. These zones from the chartlet were used to creat the predicted tide using AM500. A copy of this chartlet is appended to this Tide Note.

The operating control tide station at Penscola, Florida (872-9840) will serve as control for datum determination and the operating tide station at Panama City, Florida (872-9108), will provide additional control. These gages were maintained and operated by Chapin and Associates, Inc. These gages were monitored by contract observers and operated well through all periods of hydrography.

A Fischer Porter ADR gage was installed at Beacon Beach, Florida (872-9105) by party personnel. A dead battery caused the lost of several hours of data on 27 April 1985.

SITE	LOCATION	PERIOD
Pensacola, Florida 872-9840	30°24.2'N 87°12.8'W	entire period of survey
Panama City, Florida 872-9108	30°09.1'N 85°40.0'W	entire period of survey
Beacon Beach, Florida 872-9105	30°05.5'N 85°33.9'W	entire period of survey

PENSACOLA, FLORIDA & PANAMA CITY, FLORIDA

A line of communications was established with Chapin and Associates to assure correct operation of these gages and to be notified in case of any malfunction. No notification was made to the field party of any problems.

BEACON BEACH, FLORIDA

A Fischer Porter ADR serial No. 6803A3012M14 was installed on 27 December 1984. The gage was placed in operation in February 1985. The battery failed on 27 April 1985 causing a loss of several hours data. It was also noted that the gage operated 6 to 12 minutes off time during its operation. The gage was removed on 9 May 1985.

LEVELS

Levels were not run by party personnel to the staff at Pensacola, Florida. Levels were run to the staff at the Panama City gage on 26 October 1984 and 8 May 1985. These levels indicated no movement of the staff.

Levels run at the Beacon Beach gage on 27 December 1984 and 8 May 1985 also indicated no movement of staff.

ZONING

Zoning should be provided by the Tides and Water Levels Branch, N/OMS12.

APPROVAL SHEET

For

SURVEY H-10170 (HFP-10-1-85)

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

No direct supervision was given by me during the field work.

Approved and forwarded.

Kenneth W. Perrin

Kenneth W. Perrin, LCDR, NOAA
Chief, Hydrographic Field Parties Section

DATE: 7/19/85

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Marine Center: Atlantic

OPR: J264

Hydrographic Sheet: H-10170

Locality: Entrance to St. Andrews Bay, Florida

Time Period: February 19 - May 7, 1985

Tide Station Used: 872 9105 Beacon Beach, Florida

Plane of Reference (Mean Lower Low Water): 5.09 ft.

Height of Mean High Water Above Plane of Reference: 1.2 ft.

Remarks: Recommended Zoning:

1. In St. Andrews Bay, North of a line formed by 2 points located at 30°04'07" ~~← 30°04.45'~~ ~~30°04.1'~~ → 30°04'00" and 85°37'24" ~~← 85°38.15'~~ ~~85°37.2'~~ → 85°36'54.6" Zone Direct on 872 9105.
2. South of the previous line, zone on 872 9105 and apply a -20 minute time correction and x1.09 range ratio to all heights.

NOTE: POSITION OF SAND SPITS HAS SHIFTED SO CO-ORDS. HAVE BEEN CHANGED TO FIT NEW POSITIONS.

JOE MULLEN HAS BEEN INFORMED OF THESE CHANGES.

9/12/85 J.N.S.

James R Hubbard
Chief, Tidal Datums Section

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

OPR-J264
H-10170
HFP-10-1-85

GEOGRAPHIC NAMES

ST. ANDREW BAY, FLORIDA SHEET "C"

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LI	K
BEACON BEACH	11390			✓					
~~CROOKED ISLAND~~	~~11389~~			✓					
~~DAVIS POINT~~	~~11390~~			✓					
LANDS END	11390			✓					
ST. ANDREW BAY	11390			✓					
~~ST. ANDREW SOUND~~	~~11389~~			✓					
~~ST. ANDREWS ST. PARK~~	~~11390~~			✓					
SHELL ISLAND	11390			✓					
SPANISH SHANTY PT.	11390			✓					
GULF OF MEXICO									
FLORIDA (title)									
Note: crossed out geographic names are outside the sheet's limits.									

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

H-10170

GEOGRAPHIC NAMES

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
BEACON BEACH (locality)										1
FLORIDA (title)										2
GULF OF MEXICO										3
LANDS END										4
SAINT ANDREW BAY										5
SHELL ISLAND										6
SPANISH SHANTY POINT										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
					Approved:					17
										18
					Charles E. Harrington					19
					Chief Geographer - N/CG2x5					20
					AUG 10 1987					21
										22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 77-27(H)
(9-83)

U.S. DEPARTMENT OF COMMERCE

HYDROGRAPHIC SURVEY STATISTICS

REGISTRY NUMBER: H-10170

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	7
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	2

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDION FILES	1					
ENVELOPES						
VOLUMES	9					
CAHIERS						
BOXES						

SHORELINE DATA

SHORELINE MAPS (List): TP-00343, TP-00347

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List): 11390 14th Ed. 7/16/83 & 11391 15th Ed., 10/29/83

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS VERIFICATION	AMOUNTS EVALUATION	AMOUNTS TOTALS
POSITIONS ON SHEET			2565
POSITIONS REVISED			1658
SOUNDINGS REVISED			223
CONTROL STATIONS REVISED			
	TIME-HOURS VERIFICATION	TIME-HOURS EVALUATION	TIME-HOURS TOTALS
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	70.0		70.0
VERIFICATION OF SOUNDINGS	213.5		213.5
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	80.5		80.5
COMPARISON WITH PRIOR SURVEYS AND CHARTS		23.0	23.0
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		52.0	52.0
GEOGRAPHIC NAMES			
OTHER* Digitizing	20.0		20.0
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	384.0	75.0	459.0

Pre-processing Examination by S. Iwamoto	*Beginning Date* 2/19/85	*Ending Date* 5/7/85
Verification of Field Data by R. Shipley, T. Jones	*Time (Hours)* 364	*Ending Date* 11/17/86
Verification Check by A. Luceno	*Time (Hours)* 85	*Ending Date* 12/10/86
Evaluation and Analysis by J. Stringham, B. Olmstead, J. Green	*Time (Hours)* 62	*Ending Date* 12/18/86
Inspection by D. Hill	*Time (Hours)* 4	*Ending Date* 12/23/86

☆ U.S. GOVT. PRINTING OFFICE 1983: 764-006/6061

PACIFIC MARINE CENTER
EVALUATION REPORT
H-10170

1. INTRODUCTION

H-10170 was accomplished by the Hydrographic Field Party #3 in accordance with the following project instructions:

OPR-J264-HFP-83, dated August 15, 1983
Change Number 1, dated September 30, 1983
Change Number 2, dated October 18, 1984
Change Number 3, dated October 22, 1984

This is a basic survey of St. Andrew Bay and its southeastern entrance. This entrance is at the southeast end of Shell Island. It is not marked, is constantly shifting, and at the time of the survey was considered unsafe for navigation. Depths inside the bay range from 0 to 43 feet, with the deepest depths located southeast of Beacon Beach. The southeast tip of Shell Island as well as the high water line of the northern shore of St Andrew Bay eastward of longitude 85°37'W is subject to frequent change by accretion. The bottom throughout the surveyed area is predominantly sandy, interspersed with broken shell.

Predicted tides based on the Pensacola, Florida tide gage were used during field processing. Tide correctors used for the final reduction of soundings reflect approved hourly heights zoned from the Beacon Beach, Florida, Fisher Porter ADR tide gage.

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic. The TRA, sound velocity and electronic control correctors have been revised during office processing to apply settlement and squat to the TRA correctors and to reflect recomputed correctors for the velocity of sound and the electronic positioning. The revised data is listed in the smooth position/sounding printout.

A digital file for this survey has been generated and includes categories of information required to comply with N/CG2 Hydrographic Survey Guideline No. 23, Completion of Digital Hydrographic Surveys, September 7, 1983. Certain descriptive information, however, may not be included in the digital record due to the restrictions of the presently available cartographic codes. The user should refer to the smooth sheet for complete information.

2. CONTROL AND SHORELINE

Horizontal control and hydrographic positioning are adequately discussed in sections F and G of the hydrographer's report.

Positions of horizontal control stations used during hydrography are either published or field values based on the North American Datum of 1927.

Applicable shoreline manuscripts are TP-00343 and TP-00347. These are registered Class I maps that originate from photography dated January 1977 and April 1977 and were field edited in 1978.

Significant changes in the high water line were observed at the southeast end of Shell Island and in the shoreline east of longitude 85°37'W. This change in the high water line was determined by detached positions. However, two small stretches of shoreline in the vicinity of latitude 30°03'48"N, longitude 85°36'30"W and southeast of longitude 85°35'12"W were without positional data and were transferred to the smooth sheet from the field sheet.

3. HYDROGRAPHY

Soundings at line crossings are in good agreement. Hydrography within the limits of the sheet is adequate to:

a. Delineate the bottom configuration, determine least depths, and to draw the standard depth curves.

b. Reveal that there are no significant discrepancies or anomalies requiring further investigation.

c. Show that the survey had been properly controlled and soundings are plotted correctly.

4. CONDITION OF SURVEY

The hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change No. 3, the Hydrographic Survey Guidelines, the AMC OPORDER,and applicable sections of the PMC OPORDER, except as noted in the Preprocessing Examination Report, dated August 27,1985, and as follows:

a. The hydrographer conducted an unnecessary comparison of present survey data with superseded portions of prior surveys H-1375 and H-5024.

b. The hydrographer's recommendations for disproval of prior survey and charted features are not supported by documentation of the search methods and procedures.

5. JUNCTIONS

H-10170 junctions with the following surveys:

Survey	Year	Scale	Area
H-9915	1980	1:20,000	south
H-10122	1985	1:10,000	northwest

Soundings were transferred from H-10122 to justify depth curves and to portray shoaler information. The junction with H-10122 has been satisfactorily effected.

H-9915 has been processed and forwarded for charting. Junction comparisons were made using a copy. Soundings are in agreement. Depth curves on H-9915 should be adjusted to conform with those on this survey.

6. COMPARISON WITH PRIOR SURVEYS

H-1375 (1877) 1:20,000

No meaningful comparison can be made with this survey. Considerable changes have occurred as evidenced by succeeding surveys of 1930 and 1946-47. There are no charting data on the latest charts originating from this survey. This survey has been superseded by the more recent surveys.

H-5024 (1930) 1:10,000

Good agreement with this survey exists west of longitude 85°40'W. Considerable changes in depths influenced to a large extent by the shifting of the shoreline has occurred at the southeastern portion of Shell Island and the northern shore of the approach to St Andrew Bay east of longitude 85°37'W. Except for the area east of longitude 85°37'W and several soundings and features along the northern shore of the surveyed area west of longitude 85°40'W, H-5024 has been superseded by H-7173. The discussion of changes in depths and other features found in the Descriptive Report, section K (H-5024) has been annotated as necessary to reference H-7173. The following features originating from H-5024 not found or discussed during this survey have been transferred to the smooth sheet as:

	Latitude	Longitude
Pier ruins	30°05'58"N	85°39'27"W
Pier ruins	30°05'54"N	85°39'22"W

H-7173 (1946-47) 1:10,000

Except for areas where accretion has occurred, good agreement exists between the surveys. A detailed discussion of significant changes in depths and other features can be found in the Descriptive Report. The following features, not found or adequately disproven, have been carried forward from H-7173 to this survey:

Submerged pile	30°06'13"N	85°40'13"W
Pier ruins	30°06'15"N	85°40'11"W
Pier ruins	30°06'01"N	85°39'33"W
Submerged pile	30°05'58"N	85°39'30"W
Pier ruins	30°05'59"N	85°39'29"W
Submerged pile	30°05'57"N	85°39'28"W
Submerged pile	30°05'53"N	85°39'22"W
Pier ruins	30°05'17"N	85°39'08"W

AWOIS items originating from the prior surveys are adequately discussed in sections K and L of the hydrographer's report.

With the transfer of selected features from H-7173 and H-5024, H-10170 is adequate to supersede the prior surveys within their common areas.

7. COMPARISON WITH CHART

Chart 11390,14th Edition, dated July 16,1983, scale 1:40,000
Chart 11391,15th Edition, dated October 29,1983, scale 1:25,000

a. Hydrography - Most charted information originates from prior survey H-7173. Several soundings and features adjacent to the northern shore of St. Andrew Bay west of longitude 85°40'W and the charted soundings east of longitude 85°37'W originate from H-5024. Other charted features originate from miscellaneous sources.

AWOIS items originating from the miscellaneous sources are adequately discussed in sections K and L of the hydrographer's report.

Geographic names appearing on the smooth sheet originate and are plotted in accordance with these charts.

H-10170 is adequate to supersede charted hydrography within the common area.

The following Dangers to Navigation Reports (copies appended) have been submitted to the Coast Guard.

Originator	Date	Coast Guard District
HFP-3	May 10,1985	Eighth
HFP-3	May 17,1985	Eighth

No additional dangers were identified during office processing; however, a chartlet of the entrance was prepared as recommended by the hydrographer and forwarded to the USCG. A copy is attached.

b. Controlling Depths - There are no controlling depths within the limits of this survey.

c. Aids to Navigation - There are no fixed or floating aids within the limits of this survey.

8. COMPLIANCE WITH INSTRUCTIONS

H-10170 adequately complies with the project instructions noted in section 1 of this report.

9. ADDITIONAL FIELD WORK

This is an adequate basic survey. Additional field work to update charting information for the features transferred from H-5024 and H-7173 should be scheduled on a time available basis.

Respectfully submitted,

for Arsenio A. Luceno
Cartographer

This survey has been examined and it meets Charting and Geodetic Services standards and requirements for use in nautical charting. The survey is recommended for approval.

Dennis Hill
Chief, Hydrographic Section

ATTACHMENT TO DESCRIPTIVE REPORT FOR H-10170

I have reviewed the smooth sheet, accompanying data, and reports of this hydrographic survey. Except as noted in the Evaluation Report, the hydrographic survey meets or exceeds Charting and Geodetic Services (C&GS) standards, complies with instructions, and is accurately and completely represented by the smooth sheet and digital data file for use in nautical charting.

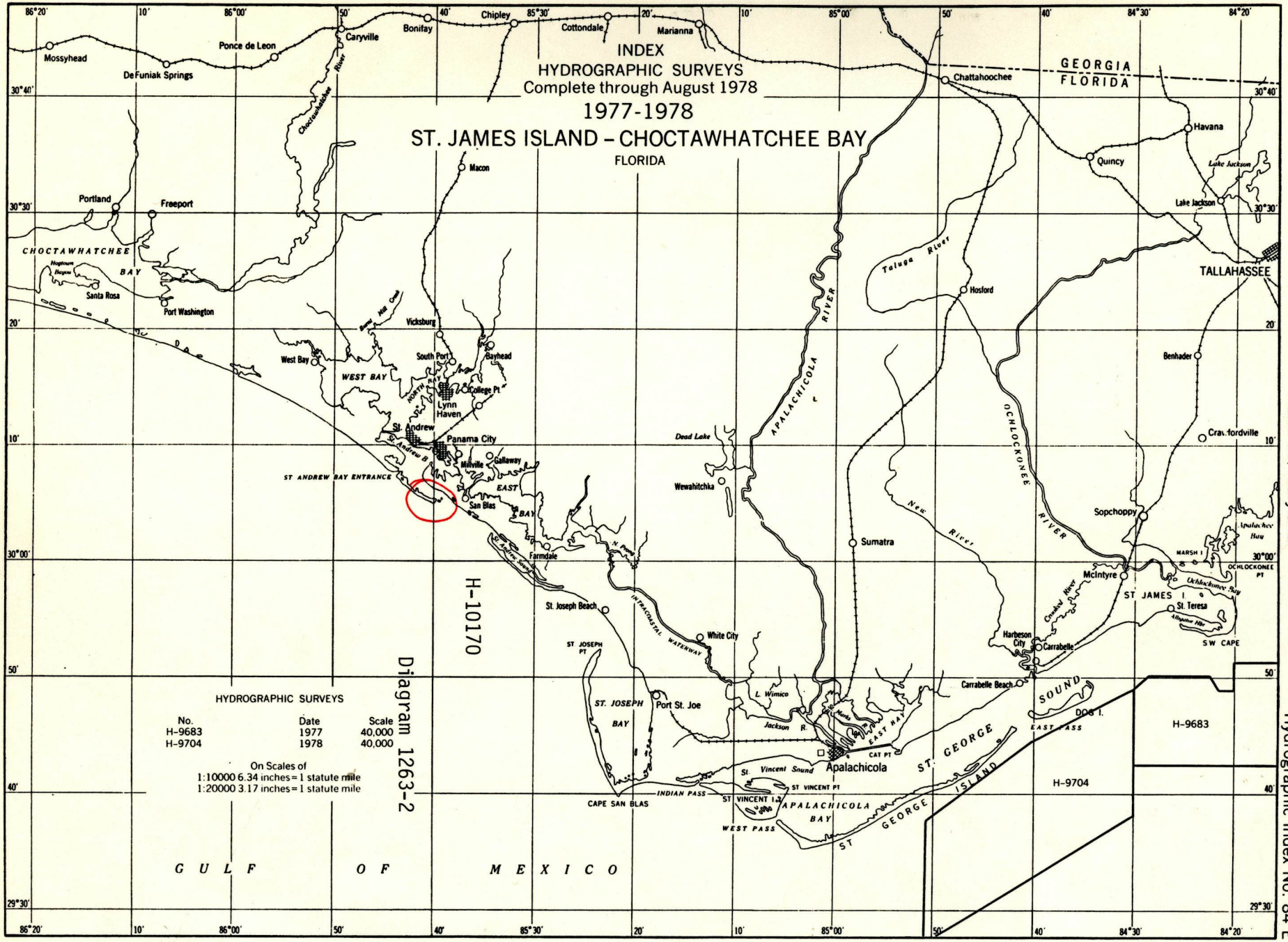
Thomas W. Richards 12-23-86
Chief, Nautical Chart Branch (Date)

CLEARANCE: for N/MOP2:LWMordock

SIGNATURE AND DATE: Gerald B. Mello 24 Dec 86

After review of the smooth sheet and accompanying reports, I hereby certify this survey is accurate, complete, and meets appropriate standards with only the exceptions as noted above. The above recommendations are forwarded with my concurrence.

Robert L. Sandefur 12-31-86
Director, Pacific Marine Center (Date)



DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Rockville, Maryland

Hydrographic Index No. 84 E

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10170

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
11391	8-5-87	L.P. LaBossiere	Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via
			Drawing No. 33
11390A	8-5-87	L.P. LaBossiere	Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via
			Drawing No. 16
11393B	8-5-87	L.P. LaBossiere	Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via
			Drawing No. 16
11389	8-5-87	L.P. LaBossiere	Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via
			Drawing No. 43
11360	8-13-90	Ed Martin	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 45 thru 11389 dwg 45
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.

Appd to Stds 2-4-87 [illegible]