10450

10450

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. AHP-10-13-93

Registry No. H-10450

LOCALITY

State ..... Florida

General Locality ..... Pensacola Bay

Sublocality ..... Escribano Point to Bay Point

19 93

CHIEF OF PARTY

LT T.R. Waddington

LIBRARY & ARCHIVES

DATE ..... July 12, 1994

*U.S. GOV. PRINTING OFFICE: 1987—756-980

Master Diagram 1265-3

CHTS
CP5
11385 'B' main
11385 'B' ext
11382 NC

NOAA FORM 77-28
(11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO. H-10450

FIELD NO. AHP-10-13-92

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

State: Florida

General locality: Pensacola Bay

Locality: Escribano Point to Bay Point

Scale: 1:10,000 Date of survey: Dec 31, 1992 to Feb 24, 1993

Instructions dated: September 25, 1992 Project No.: OPR-J223-AHP

Vessel: NOAA Launch 1292

Chief of party: LT Thomas R. Waddington, NOAA

Surveyed by: G.D. Hendrix, L.A. Martinez, M.J. McMann, LT R. Rogers

Soundings taken by echo sounder, hand lead, pole: Innerspace Model 448 echo sounder

Graphic record scaled by: G.D. Hendrix, L.A. Martinez, M.J. McMann

Graphic record checked by: G.D. Hendrix, L.A. Martinez, M.J. McMann

Verification by: ~~Processed by~~ R. Mihailov, G.E. Kay Automated plot by: PHS Xynetics Plotter

Evaluation by: ~~Verification by~~ R. Mihailov

Soundings in meters and decimeters at ~~MLW~~ MLLW

REMARKS: Time in UTC. Revisions and marginal notes in black were generated during office processing. All separates are filed with the hydrographic data, as a result page numbering may be interrupted or non-sequential. All depths listed in this report are referenced to mean lower low water unless otherwise noted.

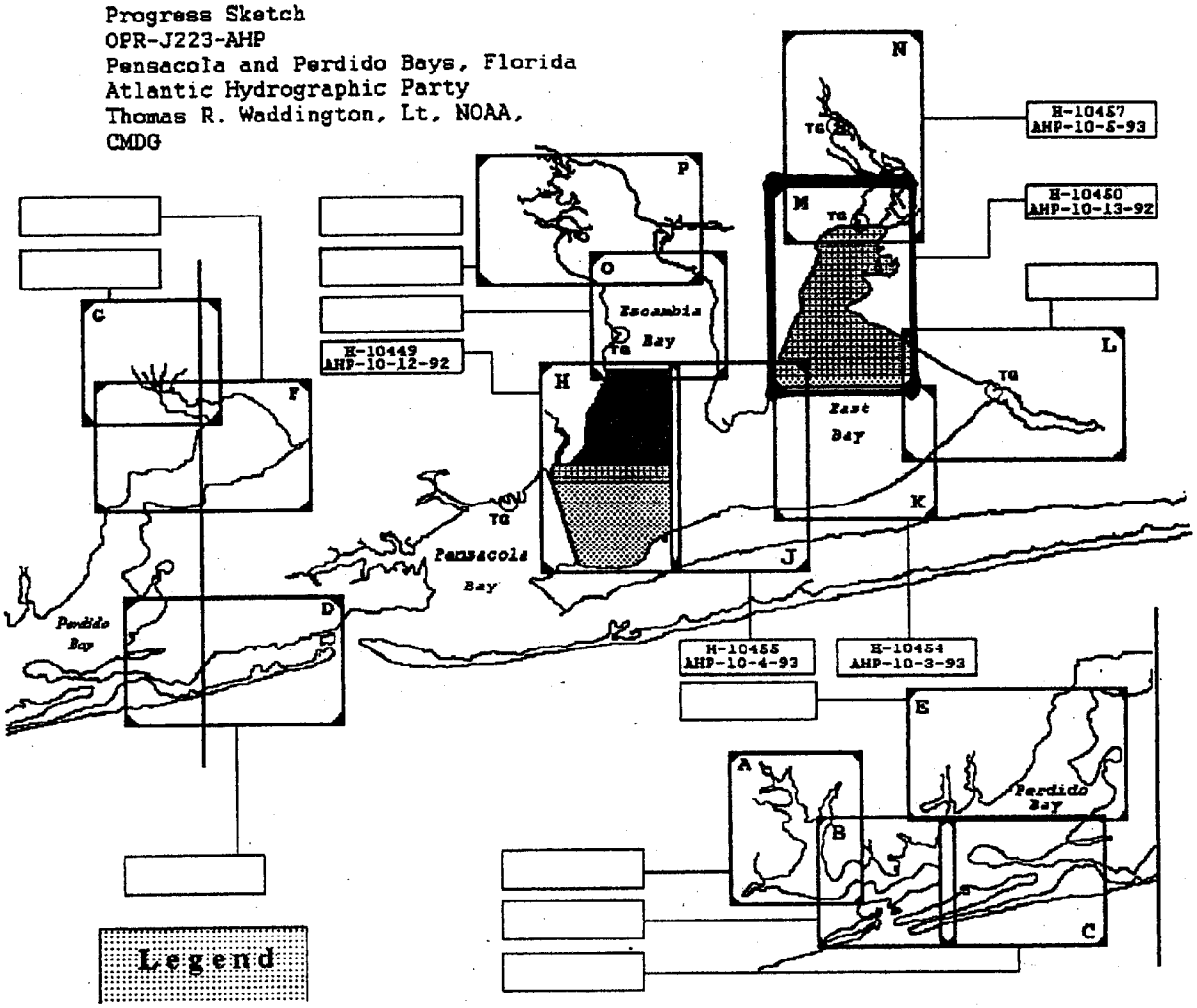
AWOIS/SURF 10/21/94 MCR

12-13-96

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

U.S. GOVERNMENT PRINTING OFFICE: 1984 - 432-007/41215

Progress Sketch
OPR-J223-AHP
Pensacola and Perdido Bays, Florida
Atlantic Hydrographic Party
Thomas R. Waddington, Lt. NOAA,
CMDG



DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10450
FIELD NO. AHP2-10-13-92
SCALE: 1:10,000
1992-1993
ATLANTIC HYDROGRAPHIC PARTY
CHIEF OF PARTY: Lt. Thomas R. Waddington

A. PROJECT

This survey was conducted in accordance with Hydrographic Project Instructions OPR-J223-AHP, Pensacola and Perdido Bays, Florida and Alabama, dated September 25, 1992 and amended by Change No. 1 dated January 4, ~~1992~~ 1993. This survey is designated as sheet "M" in the project instructions.

The purpose of project OPR-J223-AHP is to provide contemporary hydrography for the maintenance of existing charts. Prior surveys in this area were conducted in 1935.

B. AREA SURVEYED

The area surveyed for H-10450 covers northern East Bay and Blackwater Bay from Escribano Pt. to Robinson Pt. The survey limits are as follows:

North - Latitude 30°33'12"N
South - Latitude 30°27'45"N
East - Longitude 086°59'03"W
West - Longitude 087°03'48"W

This survey was conducted from December 31, 1992 (DN 365) to February 24, 1993 (DN 05~~5~~4).

C. SURVEY VESSELS

Vessel 0517 (EDP No. 0517) a 21-foot MonArk was the sounding vessel used to collect all survey data. There were no unusual vessel configurations nor problems encountered.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

The Hydrographic Data Acquisition and Processing System (HDAPS) was used to process all hydrographic data for this survey. Version 4.03 of the PC-DAS suite of programs was used for on-line data acquisition on the survey vessel. Listings of version numbers for the various HP-DPS programs used for all data processing are provided in the Appendix VI. Filed with hydrographic data.

In addition to the HDAPS, the following non-HDAPS computer programs were used:

VELOCITY (IBM PC)	Ver. 1.11 (3/9/90)
VELOCITY (IBM PC)	Ver. 2.0 (12/18/92)
NADCON (IBM PC)	Ver. 1.01
WORDPERFECT (IBM PC)	Ver. 5.1

E. SONAR EQUIPMENT

Not Applicable.

F. SOUNDING EQUIPMENT

An Innerspace model 448 depth sounder, serial number 241 was used until January 22, 1993 (DN 022). Because it would not digitize shallower than 0.8m, it was replaced with serial number 187. This was used through the end of the survey.

A standard lead line calibrated in meters, serial number 0517, was used during this survey for comparison readings with the echo sounder. A 5 meter long wooden sounding pole, constructed according to HSG. No. 69, was used to obtain any pole soundings.

Depths on this survey ranged from 0.5 to 4.5 meters.

G. CORRECTIONS TO SOUNDINGS

Soundings were recorded in meters. The Innerspace 448 depth sounder is adjusted for an assumed speed of sound through water of 1500 meters/second. Corrections for the speed of sound through water were computed from data obtained with Odom Hydrographic Systems, Inc. DIGIBAR electronic speed of sound probe serial number 154. Data quality assurance tests were performed prior to each cast. Program "Velocity" version 1.11 and version 2.0 were used to compute speed of sound corrections. Copies of the tables and velocity cast data are in the Survey Separates. *

* Filed with hydrographic data.

The following speed of sound casts were taken during the survey.

Cast	Table	DN	DATE	Latitude	Longitude	Depth Actual/Extended
1	--	345	12/10/92	30°23'36"N	087°10'48"W	8.0/10.4
2	--	352	12/17/92	30°23'36"N	087°10'48"W	8.0/10.4
3	--	364	12/29/92	30°23'36"N	087°10'48"W	8.0/10.4
4	--	021	01/21/93	30°23'36"N	087°10'48"W	3.0/ 3.9
5	--	035	02/04/93	30°23'36"N	087°10'48"W	9.0/11.7

None of the above casts produced any corrector values. Sound velocity data should not be needed for use in final processing at the Pacific Hydrographic Section.

The Innerspace 448 depth sounder is semi-automated and does not need adjustments of the tide and draft and speed of sound. Any required adjustments of the gain and chart speed were made and noted on the echogram. The digitized soundings agreed with the analog trace within 0.1 meter. Any necessary corrections were made during scanning of the echogram.

Weather permitting, lead line comparisons were conducted each day of hydrography to determine an instrument corrector. No instrument error was detected from these comparisons. The lead line comparison form can be found in the Survey Separates.*

A static draft of 0.3 meter was applied to the on-line data. The draft was measured by subtracting the difference from a punch mark on the side of Launch 0517, 0.6 meters above the transducer, to the water surface.

Settlement and squat measurements were performed on May 15, 1992 (DN 136), at Shalimar, Florida, using Zeiss level S/N 08754. Settlement and squat correctors and the static draft corrector were applied on-line through the offset table. Copies of the field data, the graphs of the settlement and squat correctors vs. speed, and the offset table are included in the Survey Separates.*

Soundings which were collected near shore or in shoal water less than 0.8 m, the point at which the Innerspace S/N 241 digitizer locked up, were taken by pole sounding. This affected data collected from DN 365 through DN 022.

The final field sheet was plotted using predicted tides determined from the Pensacola, Florida tide station, number 872-9840, using one time and height corrector as opposed to the two

* Filed with hydrographic data.

listed in the project instructions for Blackwater River, Blackwater River/East Bay. The +1 hr 00 min time corrector and a X1.26 range ratio was applied to tide tables and reapplied to all data.

The final field sheet was plotted after the HDAPS "Reapply" program had been used to log the proper depth correctors (from the tide table and offset table) to each data record.

Approved tides were requested from the Sea and Lake Levels Branch, N/OES231, in a letter dated April 7, 1993. A copy of the letter is included in Appendix V of this report. *

H. CONTROL STATIONS

The horizontal control datum for this project is the North American Datum of 1983. One station was used to control this survey. A copy of the Control Station List is ~~included in Appendix III of~~ attached to this report.

The Atlantic Hydrographic Party used the Global Positioning System (GPS) to establish horizontal control for this project. The horizontal control report titled "GPS Traverse, Pensacola and Escambia Bays, Florida" was written and submitted by AHP in December 1992 for OPR-J223 to N/CG 23322.

I. HYDROGRAPHIC POSITION CONTROL

Differential GPS was used as the method of positioning for all hydrographic data on this survey. An Ashtech model XII receiver, serial number E139 was used for the reference station. An Ashtech sensor, serial number 700417A1065 was used for the remote station on vessel 0517. Ashtech supplied Maxxon VHF radios using channel one (Frequency 170.200 Mhz) were used as the datalink between reference and remote stations. This equipment met the accuracy requirements for this 1:10,000 survey.

To check the reference site for multi-path problems, program Monitor was run for 24 hours starting on November 12, 1992. The GPS availability at this site was determined to be better than 99% from this test. A copy of the Plot of Radial Error in Position and the Outlier File are included in the Survey Separates. *

Performance checks were done by pulling the launch alongside Blackwater Channel Light 30, Light List No. 4685, Volume IV, Gulf of Mexico, 1993. AHP located this light with GPS to third order standards. The data was not included in the Horizontal Control Report. Copies of the Vector Summary and Forward Computation are included in the Survey Separates. Performance checks were obtained daily. The raw record and the Abstract of these checks are included in the survey separates. *

* Filed with the hydrographic data.

Hydrographic operations ceased whenever the horizontal dilution of precision (HDOP) values exceeded 3.8 This is calculated by the formula found in the Field Procedures Manual, using an ESE value of 4m, an EPE value of 15m, and an EDE value of 0.2m. The periods of poor satellite geometry causing high HDOP values were minimal and occurred on day numbers 053, 055 and 057. Data was reviewed during office processing with no problems encountered.

An occasional problem was encountered when an apparently good position plotted questionably on the raw track plot. This problem is attributable to the survey computer's inability to immediately compute an accurate position after an extended period of questionable DGPS data. These positions were reviewed, then edited or rejected as warranted.

J. SHORELINE

Shoreline shown on the final field sheet was transferred by hand from TP-00541. This manuscript was compiled on NAD 1927 at 1:20,000 scale and enlarged to 1:10,000. The copy supplied to the field unit was poor quality and very distorted. The shoreline along the eastern shore of the Blackwater River between Grassy Point and Skim Lake was missing in several places. The chart enlargement was used to fill in the gaps on the manuscript, which was then applied to the final field sheet. Because of the distortion on TP-00541, the shoreline was difficult to apply, and was done by shifting the sheet north or south to match the nearest 30 minute grid square. Compilation of the Cartographic Revision Survey, referred to in section 4.1.1 of the Project Instructions, was not completed in time for use on H-10450. Revision sheet was used to compile shoreline on smooth sheet.

Shoreline verification was accomplished by comparing the main scheme hydrography which junctions at shore, detached positions, or by visual inspection. Verified shoreline is shown in black ink on the final field sheet. While it was difficult to compare the shoreline in the area between Grassy Point and Skim Lake (including Catfish Basin), no shoreline changes are recommended on this survey. Numerous new piers were located during the course of this survey and are also shown in red on the final field sheet. Charted shoreline should be superseded by shoreline from TP-00541. — CONCUR

The following features were identified on this survey which did not appear on TP-00541:

Position	Latitude	Longitude	Description
1546	30°30'53.86"N	087°00'26.05"W	Pier
1547	30°30'58.50"N	087°00'27.89"W	Pier Ruins
1560	30°30'46.07"N	087°02'49.63"W	Pier

Position	Latitude	Longitude	Description
1561	30°30'49.87"N	087°02'47.66"W	Pier
1562	30°30'52.20"N	087°02'46.31"W	Pier
1563	30°30'54.29"N	087°02'44.78"W	Pier
1564	30°30'56.19"N	087°02'43.91"W	Pier
1565	30°30'57.14"N	087°02'43.46"W	Pier
1566	30°30'58.51"N	087°02'42.38"W	Pier
1567	30°31'00.67"N	087°02'41.61"W	Pier
1568	30°31'02.54"N	087°02'40.22"W	Pier
1569	30°31'04.32"W	087°02'37.76"W	Pier
1570	30°31'05.66"N	087°02'36.43"W	Pier
1624	30°32'07.82"N	087°02'11.92"W	Pier
1625	30°32'11.88"N	087°02'13.40"W	Pier
1627	30°32'40.91"N	087°01'28.43"W	Pier
1628	30°32'41.79"N	087°01'25.11"W	Pier
1631	30°32'59.34"N	087°00'55.00"W	Pier
1632	30°33'00.12"N	087°00'55.99"W	Pier
1633	30°33'01.35"N	087°00'56.52"W	Pier
1634	30°33'07.81"N	087°00'56.96"W	Pier
1635	30°33'11.05"N	087°00'53.57"W	Pier

A pier shown on TP-00541 as intact, was found in ruins at position 1626, latitude 30°32'22.64"N, longitude 087°02'08.03"W.-concur

Range lights listed in the following table are shown on TP-00541 but are not charted and do not exist.

Blackwater Channel Inner Range A Rear Lt.	Lat. 30°32'05"N Long. 87°01'05"W
Blackwater Channel Inner Range A Front Lt.	Lat. 30°31'40"N Long. 87°01'41"W
Blackwater Channel Outer Range B Front Lt.	Lat. 30°30'31"N Long. 87°02'17"W
Blackwater Channel Outer Range B Rear Lt.	Lat. 30°30'03"N Long. 87°02'36"W

Verified shoreline features are shown in black ink on the final field sheet; they were assigned reference numbers which were hand plotted (along with heights) on the final field sheet. Reference number descriptions, field notes, and explanations of new shoreline features are located on the graphic record. Photographs of the features are in the Survey Separates.* A complete list of all

* Filed with the hydrographic data.

detached positions by day, generated through the HDAPS Detached Position Editor is included in the accordion file. It lists the feature or item number, and position.

K. CROSSLINES

A total of 22.4 linear nautical miles of crosslines were run on this survey which equals 8.8% of the main scheme hydrography. Cross line soundings agree to within 0.5 meter of the main scheme soundings.

L. JUNCTIONS See Evaluation Report Section 5.

This survey junctions ~~with H-10455 at the southwest corner,~~ with H-10454 to the south, with H-10460 to the southeast, and with H-10457 to the north. These are all 1:10,000 scale surveys currently in progress for OPR-J223-AHP (CY 93 operations). Junction soundings from these surveys were not yet available. Junction with survey H-10454 is complete.

M. COMPARISON WITH PRIOR SURVEYS

This survey was compared with prior survey#-5834a April-June 1935, scale 1:20,000.

No AWOIS items originate from the prior survey. The only AWOIS item assigned as part of this survey is discussed completely on the item investigation report found in ~~the Survey Separates.~~ this report.

Prior survey agreement with this survey is good, with current soundings sometimes 0.5m deeper, particularly in the deeper depths. The current inshore soundings generally compare within 0.1m to 0.2m of prior survey soundings.

There are changes from the prior survey with the addition of the Blackwater Bay channel. This channel does not appear on the prior survey but is charted as a dredged channel with a controlling depth of 7 feet. The prior survey also presents range lights and beacons in the survey area. These items do not exist in the survey area. The prior survey has only minor shoreline changes, with the greatest change being the addition of private piers, most of which are not depicted on the T-map.

The following geographic name discrepancies between the chart and prior survey were noted:

Prior (5834a)	Chart(11385)
Big Catfish Basin	Catfish Basin
Broad River	Skim Lake
Shadrick Lake	(no name on chart)
Shell Hammock Bayou	(no name on chart)

N. COMPARISON WITH THE CHART

Comparison was made with the following chart of the area:

Chart No.	Edition	Date
11385	20th	November 23, 1991

One AWOIS item (#8340) was assigned as part of this survey. This item is discussed on the item investigation report ~~in the Survey Separates.~~ attached to this report.

One danger to navigation report, regarding ten uncharted 1 foot diameter wooden piles, was submitted to the Eighth U.S. Coast Guard District for inclusion in the Local Notice to Mariners. A copy of the letter detailing this danger is included in ~~Appendix I. of~~ this report.

General sounding comparison between the chart and this survey is good. The survey soundings are within 0.5 meter; generally deeper in East Bay and shallower in Blackwater Bay.

All charted and discovered shoal areas within the limits of the survey were developed by running reduced line spacing splits of the main scheme. The present soundings are adequate to supersede charted soundings within the common areas.

Discrepancies with the chart are as follows:

Two spikes, one at latitude 30°31'19.4"N, longitude 087°01'46.2"W, and the other at latitude 30°31'14.3"N, longitude 087°01'44.9"W, were located during channel line hydrography on Feb. 12, 1993 (DN 043). These spikes were investigated on Feb. 24, 1993 DN 055 by conducting a chain drag 30 meters in width and 100 meters long over each spike. Line spacing was 10 meters. Nothing was snagged. The drag was deployed with 50 feet of line and 60 feet of chain. These spikes were located on the edge of the channel, on both the red and green sides. The hydrographer feels these spikes

are mud left from dredge material, and recommends charting the shoal soundings found; ~~2.0~~ 1.6 m (~~6.6~~ 5.2 ft) at latitude 30°31'19.4"N, longitude 087°01'46.2"W and 1.9 m (6.2 ft) at latitude 30°31'14.3"N, longitude 087°01'44.9"W. A page size plot of this drag is included in Appendix VI. of this report.* CONCUR

Charted spoil areas located in the vicinity of latitude 30°31'00"N, longitude 87°02'10"W and latitude 30°29'00"N, longitude 87°02'30"W, were discussed with Harry Peterson from the U.S. Army Corps of Engineers in Panama City (904-763-2881) who said the spoil areas remain active. The hydrographer recommends the spoil areas remain as charted. CONCUR

A shoal in the vicinity of latitude 30°28'42"N, longitude 87°02'40"W was located during main scheme hydrography and investigated on DN 036 by splitting the main scheme to 25 meter line spacing. A corrected (by predicted tides) least depth of 1.8 meters (5.9 ft) was acquired, along with a bottom sample (PN 1706) of oysters and shell. Chart area as shown on smooth sheet.

A shoal in the area of latitude 30°28'12"N, longitude 87°02'22"W was located during main scheme hydrography and investigated on DN 036 by splitting the main scheme to 25 meter line spacing. A corrected (by predicted tides) least depth of 1.8 meters (5.9 ft) was acquired, along with a bottom sample (PN 1707) of oysters and shell. Chart area as shown on smooth sheet.

A shoal in the area of latitude 30°29'12"N, longitude 87°~~00~~01'15"W was located during main scheme hydrography and investigated on DN 036 by splitting the main scheme to 25 meter line spacing. A corrected (by predicted tides) least depth of 1.8 meters (5.9 ft) was obtained, along with a bottom sample (PN 1702) of oysters and shell. Chart area as shown on smooth sheet.

A charted 6 foot (1.8 m) isolated sounding at latitude 30°31'10"N, longitude 087°01'35"W was investigated on DN 053 by splitting the main scheme hydrography to 25 meter line spacing. A corrected (by predicted tides) least depth of 2.2 meters (7.2 ft) was obtained. The hydrographer recommends removing this the charted 6 foot (1.8 m) sounding. Concur, and chart area as shown on smooth sheet.

A charted 5 foot (1.5 m) isolated sounding at latitude 30°29'00"N, longitude 087°02'50"W was investigated on DN 054 by splitting the main scheme hydrography to 25 meter line spacing. A corrected least depth of 2.0 meters (6.6 ft) was acquired, along with a bottom sample (PN 1884) of broken shell. This 5 foot (1.5 m) sounding should be replaced by a six foot (~~1.8~~ 2.0 m) sounding. - Concur

A charted 6 foot (1.8 m) shoal at latitude 30°29'10"N, longitude 087°01'10"W was investigated on DN 054 by splitting the main scheme hydrography to 25 meter line spacing. A corrected least depth of 1.7 meters (5.6 ft) was acquired, along with bottom

* Filed with the hydrographic data.

samples (PN 1704, 1705) consisting of oysters and shell. This 6 foot shoal area should be revised based on soundings from this survey. This shoal area is formed by numerous oyster reefs. Concur

A charted 6 foot (1.8 m) isolated sounding at latitude 30°28'30"N, longitude 086°59'45"W was investigated on DN 054 by splitting the main scheme hydrography to 25 meter line spacing. A corrected (by ~~predicted tides~~ smooth tides) least depth of 2.0 meters (6.0 ft) was acquired, along with a bottom sample (PN 1824) consisting of oyster and shell. This isolated shoal no longer exists and should be removed from the chart. Do not concur, chart 6.0 foot (2.0 meters) sounding at location found on survey.

At latitude 30°32'54"N, longitude 87°00'51"W an area foul with piles was located on DN 053 by detached positions. This area was not charted but appeared on prior survey 5834a. Positions 1709, 1710 and 1712 define the limits of this semi-circular area foul with piles. Extending from position 1712 offshore to position 1711 is a row of piling. The piling and foul area are recommended for charting. A photograph of this area is in the Survey Separates.*
Concur, chart area foul with piles as shown on smooth sheet.

O. ADEQUACY OF SURVEY

This survey is a complete basic hydrographic survey and is adequate to supersede all prior surveys within the common area. Concur

P. AIDS TO NAVIGATION

There are ten aids to navigation in the survey area. Nine are red daybeacons with radar reflectors and do not have positions shown for them in the U.S.C.G Light List, Volume IV, Gulf Of Mexico, 1993. One is Blackwater Channel Light 21, U.S.C.G. Light List, Volume IV, 1993, No. 4660. The surveyed position is latitude 30°31'21.0"N, longitude 087°01'46.1"W, which compared well with latitude 30°31.3'N, longitude 87°01.8'W shown in the light list. See NOAA Form 76-40 attached to this report.

Detached positions were taken on all aids to navigation. The comparison of the surveyed position with the charted location was:

Lt. List No.	NAVAID	PN	Comparison Results
4630	R"10"	1449	200 meters NE of charted position
4635	R"12"	1450	100 meters NE of charted position
4640	R"14"	1451	80 meters NE of charted position
4645	R"16"	1452	150 meters SW of charted position

* Filed with the hydrographic data.

Lt. List No.	NAVAID	PN	Comparison Results
4650	R"18"	1453	On Station
4655	R"20"	1557	On Station
4660	Lt."21"	1556	100 meters N of charted position
4665	R"22"	1555	450 meters SW of charted position
4670	R"24"	1554	420 meters SW of charted position
4675	R"26"	1553	500 meters SW of charted position

Chief Lewis from the U.S.C.G. Aids to Navigation Office in Pensacola, Florida (phone 904-455-2354) was contacted regarding the differences between charted and surveyed positions. He indicated that the aids have never been moved according to his records. He further stated that the navaids in the Blackwater Channel were originally established without adequate control, by locating the channel edge with depth sounding, then placing the aid. This would have resulted in poor charting positions, and explain the differences found. All of the aids serve the purpose for which they were established. The aids should be re-charted at the surveyed positions. Concur

No landmarks, bridges, overhead cables, pipelines, submerged cables nor ferry routes exist within the survey area.

Q. STATISTICS

Description	Quantity
Total Number of Positions	1985
Total Lineal Nautical Miles of Hydrography	296.3
Square Nautical Miles of Hydrography	15
Days of Production	19
Detached Positions	36
Bottom Samples	60
Tide Stations	3
Velocity Casts	5
Duplicated Positions	4

R. MISCELLANEOUS

No significant current conditions were observed while conducting this survey.

Sixty bottom samples were taken. They were submitted to the Smithsonian Institution as directed in section 6.7 of the project instructions. Bottom sample positions are plotted on the overlay and are listed on the Oceanographic Log Sheet-M, NOAA Form 75-44, which may be found in the Survey Separates.*

There were no predicted tide anomalies observed during this survey.

Position numbers were duplicated four times during this survey. When an on-line system crash occurs no position number is assigned at the end of that line. When survey operations are resumed the beginning fix number is sometimes duplicated.

The ASSIGN FIX function of the quick edit program was used to assign position numbers to the beginning or ending of a line as needed.

S. RECOMMENDATIONS

Specific recommendations concerning this survey are made in sections "J", "N", and "P" of this report. No inadequacies, additional work, nor further investigations were identified after field work was completed. – CONCUR

T. REFERRAL TO REPORTS

Title	Transmittal Information
Horizontal Control Report for OPR-J223-AHP2	Field Photogrammetry Section Norfolk, VA (N/CG23322)(1993)

Respectfully Submitted by:

Larry A. Martinez
Atlantic Hydrographic Party

* Filed with the hydrographic data.

AWOIS NO: 8340

Item Description: Submerged Wreck PA

Source: LNM17/87--8TH CGD

AWOIS Position: Lat - 30°32'36.70"N Lon - 87°00'59.87"W

Required Investigation: VS, ES, BD, SD - 200m radius.

Charts Affected: 11385

INVESTIGATION

Date(s)/DN(s): 2-24-92 / 055 (OPR-J223-AHP2, H-10450)

Position Numbers: 1890 - 1973 Launch Number: 0517

Investigation Used: Chain Drag

Position Determined By: Ashtech model XII DGPS

Investigation Summary: A 200 meter radius chain drag was conducted at 10 meter line spacing parallel to main scheme hydrography. The drag was deployed with 50 feet of line and 60 feet of chain. Nothing was snagged.

CHARTING RECOMMENDATION

The Hydrographer recommends removal of the submerged wreck symbol and PA notation from the chart. — Concur

Recommended Position: None

Recommended Least Depth: None, chart area as shown on smooth sheet.

****

COMPILATION NOTES

Chart	Applied As
11385	deleted from chart

Control Station List
OPR-J223-AHP
H-10450
AHP-10-13-92

No.	Latitude	Longitude	Station Name
001	30°19'41.774"N	087°10'22.533"W	TRIS 1992
003	30°34'03.622"N	086°59'47.491"W	Blackwater Channel Light 30, 1992

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

(See reverse for responsible personnel)

- [ ] TO BE CHARTED
- [x] TO BE REVISED
- [ ] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
NOAA AHP2	FLORIDA	BLACKWATER CHANNEL	3/5/93

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

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
J223	Ahp 10-13-92	H-10450	NAD, 1983

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
DAYBEACON	BLACKWATER CHANNEL DBN "10" U.S.C.G. L.L. VOL.4 1993 #4630	30°28'	04.8"N	087°02'	25.4"W		F-L HYDRO D.P.	11385
DAYBEACON	BLACKWATER CHANNEL DBN "12" U.S.C.G. L.L. VOL.4 1993 #4635	30°28'	38.7"N	087°02'	18.4"W		F-L HYDRO D.P.	11385
DAYBEACON	BLACKWATER CHANNEL DBN "14" U.S.G.D. L.L. VOL.4 1993 #4640	30°29'	15.4"N	087°02'	10.6"W		F-L HYDRO D.P.	11385
DAYBEACON	BLACKWATER CHANNEL DBN "16" U.S.G.D. L.L. VOL.4 1993 #4645	30°29'	42.8"N	087°02'	04.7"W		F-L HYDRO D.P.	11385
DAYBEACON	BLACKWATER CHANNEL DBN "22" U.S.G.D. L.L. VOL.4 1993 #4665	30°31'	36.3"N	087°01'	31.0"W		F-L HYDRO D.P.	11385
DAYBEACON	BLACKWATER CHANNEL DBN "24" U.S.G.D. L.L. VOL.4 1993 #4670	30°32'	10.1"N	087°01'	07.1"W		F-L HYDRO D.P.	11385
DAYBEACON	BLACKWATER CHANNEL DBN "26" U.S.G.D. L.L. VOL.4 1993 #4675	30°32'	40.1"N	087°00	46.0"W		F-L HYDRO D.P.	11385
LIGHT	BLACKWATER CHANNEL LIGHT "21" U.S.G.D. L.L. VOL.4 1993 #4660	30°31'	21.0"N	087°01'	46.1"W		F-L HYDRO D.P.	11385
						Superseded		
	L-913(94)					See LNM 33/94, LNM 34/94 LNM 37/94		

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	NAME	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD (F-L HYDRO D.P.)	Hydrographer used the Ashtech GPS system, using differential GPS onboard the survey vessel.	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED	BRIAN A. LINK, AHP	FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ 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	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

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

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

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

FIELD (Cont'd)

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

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

II. TRIANGULATION STATION RECOVERED

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

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

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

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

Coast and Geodetic Survey
Atlantic Hydrographic Party
439 West York St.
Norfolk, VA 23510-1114

April 14, 1993

Commander, (OAN)
Eighth U. S. Coast Guard District
Hale Boggs Federal Building
501 Magazine St.
New Orleans, LA 70130-3396

Dear Sir,

While conducting a basic hydrographic survey (Registry No. H-10450) of (Pensacola) East Bay, the following uncharted features were identified as dangers to navigation and are recommended for inclusion in the Local Notice to Mariners. They are all unmarked, visible, 1 foot diameter piles. The positions are in NAD 83 datum and the elevations have been reduced to Mean Lower Low Water (MLLW) using predicted tides. This information affects chart 11385 20th Edition/November 23/91, NAD 1983 datum.

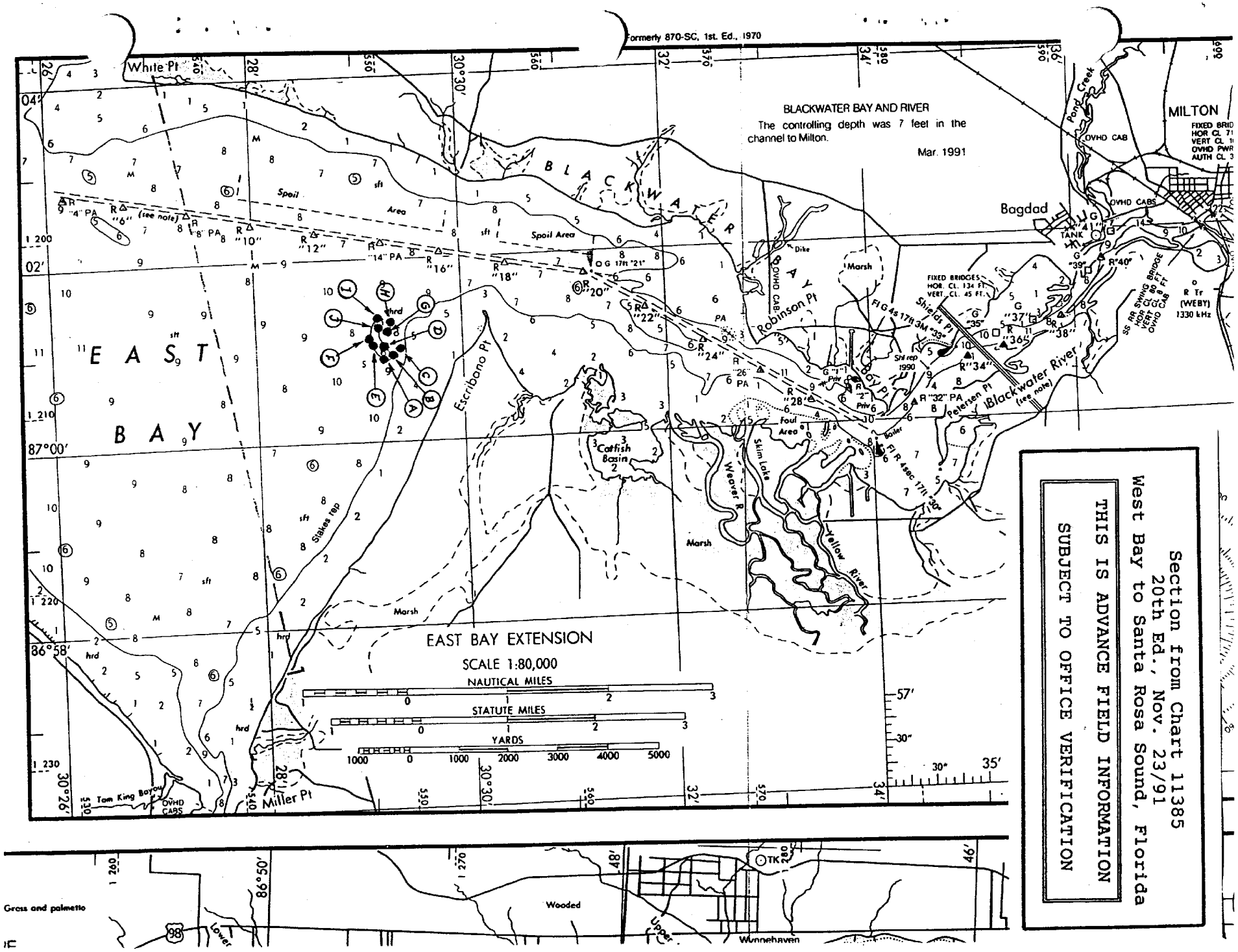
Chartlet ID	Latitude	Longitude	Height
A	30°29'13.8"N	087°00'54.9"W	9.5 ft
B	30°29'18.2"N	087°00'57.0"W	9.5 ft
C	30°29'24.0"N	087°01'01.5"W	9.5 ft
D	30°29'13.5"N	087°01'03.3"W	9.5 ft
E	30°29'07.9"N	087°01'02.0"W	9.5 ft
F	30°29'04.4"N	087°01'07.4"W	9.5 ft
G	30°29'15.6"N	087°01'12.1"W	9.5 ft
H	30°29'16.5"N	087°01'15.3"W	9.5 ft
I	30°29'10.9"N	087°01'19.8"W	9.5 ft
J	30°29'10.6"N	087°01'15.0"W	9.5 ft

approved thru Hydro stat. not published 10-12-94

These features were located using Differential Global Positioning System. A chart section showing the locations of these dangers, is attached.

THIS IS ADVANCE FIELD INFORMATION

SUBJECT TO OFFICE VERIFICATION


Formerly 870-SC, 1st. Ed., 1970
BLACKWATER BAY AND RIVER
The controlling depth was 7 feet in the channel to Milton.
Mar. 1991
EAST BAY
BLACKWATER BAY
EAST BAY EXTENSION
SCALE 1:80,000
NAUTICAL MILES
STATUTE MILES
YARDS
MILTON
Bagdad
Blackwater River
Robinson Pt
Escribano Pt
Shields Pt
Petersen Pt
Miller Pt
White Pt
Catfish Basin
Skim Lake
Weaver R
Yellow River
Pond Creek
Tom King Bayou
Wooded
Wynnehaven
Section from Chart 11385
20th Ed., Nov. 23/91
West Bay to Santa Rosa Sound, Florida
THIS IS ADVANCE FIELD INFORMATION
SUBJECT TO OFFICE VERIFICATION

Questions concerning this report should be directed to me at (904) 267-1713 or Mr. Dennis Hill at the Pacific Hydrographic Section, Seattle, WA at (206) 526-6853.

Sincerely,

Lt. Thomas R. Waddington, NOAA
Chief, Atlantic Hydrographic Party
Atlantic Hydrographic Party

Attachment

cc: N/CG221
N/CG245
DMAHTC

THIS IS ADVANCE FIELD INFORMATION

SUBJECT TO OFFICE VERIFICATION

July 1, 1994

Commander
Eighth Coast Guard District
Hale Boggs Federal Bldg.
501 Magazine Street
New Orleans, LA 70130-3396

Dear Sir:

During office processing of hydrographic survey H-10450, Florida, Pensacola Bay, Escribano Point to Bay Point it was determined that the location of several aids to navigation differs from that which is charted. These potential problems affect the following nautical chart.

Chart Number	Edition No.	Edition Date	Horizontal Datum
11385SC	21st	9/25/93	NAD83

It is recommended that this information be included in the Local Notice to Mariners.

Questions concerning this report should be directed to the Pacific Hydrographic Section at (206) 526-6853.

Sincerely,

Signature (copy to file copy)

Douglas G. Hennick
Commander, NOAA
Chief, Pacific Hydrographic Section

Enclosure

cc: DMAH/TC
N/CG221

APPROVAL SHEET

HYDROGRAPHIC SURVEY
OPR-J223-AHP2
AHP2-10-13-92
H-10450
1992-93

This hydrographic survey was conducted in accordance with the project instructions for OPR-J223-AHP2, the hydrographic manual, the hydrographic survey guidelines, and the field procedures manual. The survey data and reports were completed under frequent supervision. All boat sheets and final field sheets were reviewed in their entirety and all supporting records were also checked.

This survey is a complete hydrographic survey for the area described in Section B of this report.

Lt. Thomas R. Waddington
Chief, Atlantic Hydrographic Party Two

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

ORIGINAL

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: July 14, 1993

MARINE CENTER: Pacific

OPR: J223

HYDROGRAPHIC SHEET: H-10450

LOCALITY: Florida, Pensacola Bay, Escribano Point to Bay Point

TIME PERIOD: December 30, 1992 - February 24, 1993

TIDE STATION USED: 872-9747 Shields Point, Blackwater River, Fl.
Lat. 30° 34.9'N Lon. 87° 00.9'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): = 2.76 feet
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: = 1.6 feet

REMARKS: RECOMMENDED ZONING

1. North of 30° 30.3'N (Escribano Point), times are direct, and apply a X0.96 range ratio to all heights using Shields Point, Fl. (872-9747).

2. South of 30° 30.3'N (Escribano Point), apply a -10 minute time correction and a X0.90 range ratio to all heights using Shields Point, Fl. (872-9747).

NOTE: Hourly heights are tabulated on Central Standard Time.

CHIEF, DATUMS SECTION

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10450

Name on Survey	A ON CHART NO. 11385 SC	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	
BAY POINT (title)	X									1
BLACKWATER BAY	X									2
CATFISH BASIN	X									3
EAST BAY	X									4
ESCRIBANO POINT	X									5
FLORIDA (title)	X									6
PENSACOLA BAY (title)	X									7
ROBINSON POINT	X									8
SKIM LAKE	X									9
WEAVER RIVER	X									10
										11
										12
										13
										14
										15
				Approved:						16
										17
				Charles E. Harrington						18
				Chief Geographer-N/CG2x5						19
				MAY 12 1993						20
										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-10450

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	3
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	4

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

SHORELINE DATA

SHORELINE MAPS (List): TP-00541

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List): 11385

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	*EVALUATION*	*TOTALS*
POSITIONS ON SHEET			1841
POSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	22		22
VERIFICATION OF SOUNDINGS	44		44
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	37		37
COMPARISON WITH PRIOR SURVEYS AND CHARTS		3	3
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		35	35
GEOGRAPHIC NAMES			
OTHER*			
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	103	38	141

Pre-processing Examination by D. Haines	*Beginning Date* 4/23/93	*Ending Date* 8/23/93
Verification of Field Data by G.E. Kay, R.N. Mihailov	*Time (Hours)* 103	*Ending Date* 1/5/94
Verification Check by J.Green	*Time (Hours)* 3.0	*Ending Date* 12/15/93
Evaluation and Analysis by R.N. Mihailov	*Time (Hours)* 38	*Ending Date* 1/12/94
Inspection by D. Hill	*Time (Hours)* 3	*Ending Date* 6/23/94

EVALUATION REPORT

H-10450

1. INTRODUCTION

Survey H-10450 is a basic hydrographic survey accomplished by the Atlantic Hydrographic Party 2, under the following Project Instructions.

OPR-J259-AHP, dated September 25, 1992
CHANGE NO. 1, dated January 4, 1992

This survey was conducted in Florida, and covers the northern portion of East Bay and the southern portion of Blackwater Bay. The surveyed area is bounded by latitude 30/33/12N to the north and latitude 30/27/45N to the south. The eastern limit is longitude 86/59/03W and the western limit is longitude 86/03/48W. A portion of the Blackwater Channel resides within the surveyed limits. The shoreline consists of sand, marsh and private piers. The bottom consists mainly of mud and sand. Depths range from less than one meter along the shoreline to 4.1 meters off Robinson Point.

The prevailing winds, together with rapidly developing high and low pressure systems can have a dramatic effect on the water levels within this region. Specifically during strong northern winds, water levels may be depressed by 1.5 feet (0.5 meters).

Predicted tides for Pensacola, Florida were used for the reduction of soundings during field processing. Approved hourly heights zoned from Shields Point, Blackwater River, Florida gage 872-9747, were used during office processing.

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic. NAD 83 is used as the horizontal datum for plotting and position computations. Daily system checks by comparison with Miniranger positions confirmed the DGPS was operating properly. The offset values and velocity correctors are adequate. An accompanying computer printout contains the parameters and the correctors.

A digital file has been generated for this survey that includes categories of information required to comply with Hydrographic Survey Guideline No. 52, Standard Digital Data Exchange Format, April 15, 1986. Certain descriptive information, however, may not be 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

Sections H and I of the hydrographer's report contain adequate discussions of horizontal control and hydrographic positioning.

Additional detailed information on horizontal control is found in the Horizontal Control Report for OPR-J223-AHP, dated October 1992 and the report GPS Traverse, Pensacola and Escambia Bays, Florida, dated December, 1992.

Differential GPS (DGPS) was used to control this survey. A horizontal dilution of precision (HDOP) not to exceed 3.75 was computed for survey operations. The quality of several positions exceeds limits in terms of horizontal dilution of precision (HDOP). A review of the data, however, suggests that none of these fixes are used to position dangers to navigation. The features or soundings locate by these fixes are consistent with the surrounding information. These fixes are considered acceptable.

Positions of horizontal control stations used during hydrography are field values based on NAD 83.

The smooth sheet and accompanying overlays are annotated with NAD 27 adjustment ticks based on values determined with NGS program NADCON. Geographic positions based on NAD 27 may be plotted on the smooth sheet utilizing the NAD 83 projection by applying the following corrections.

Latitude:	0.706 seconds	(21.748 meters)
Longitude:	-0.125 seconds	(-3.333 meters)

The year of establishment of control stations shown on the smooth sheet originates with the above mentioned horizontal control reports and the hydrographer's signal list.

Blueprint 149096 (TP-00541), updated by 1992 NANCI support data, were compiled on NAD 27 and applied to this survey.

Shoreline changes are depicted on the smooth sheet in solid red, and were transferred from the final field sheet with supporting positional information. These revisions are listed on pages 5 and 6 in the hydrographer's report and are supplemented as follows.

Feature	Latitude(N)	Longitude(W)
Ramp	30/31/13.84	87/02/31.74

These revisions are adequate to supersede the common photogrammetrically delineated shoreline.

Several shoreline changes in the vicinity of latitude 30/28/00N, longitude 87/03/55W, are depicted on the smooth sheet with dashed red lines and were transferred from the junctional survey H-10454 without supporting positional information. These revisions are approximate but adequate to supersede the common photogrammetrically delineated shoreline.

3. HYDROGRAPHY

Except as noted below and elsewhere in this report, hydrography is adequate to:

a. delineate the bottom configuration, determine least depths, and draw the standard depth curves;

b. reveal there are no significant discrepancies or anomalies requiring further investigation; and

c. show the survey was properly controlled and soundings are correctly plotted.

Standard depth curves were adequately drawn and developed except the zero curve. This was due to the shallowness of some areas and the small range of tides. Inshore limit as defined by the Project Instructions, section 1.8, is the 0.7 meter depth curve.

4. CONDITION OF SURVEY

The hydrographic records and reports received for processing are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change No. 3, the Hydrographic Survey Guidelines, and the Field Procedures Manual, March 1993 Edition.

5. JUNCTIONS

Survey H-10450 junctions with the following survey.

Survey	Year	Scale	Area
H-10454	1993	1:10,000	South
H-10457	1993	1:10,000	North
H-10460	1993	1:10,000	Southeast

The junction with survey H-10454 is complete.

The junctions with surveys H-10457 and H-10460 have not been completed since these surveys are in the field. The junctions with these two surveys and survey H-10450 will be addressed in the Evaluation Reports for surveys H-10457 and H-10460. A comparison with charted depths in this area shows good agreement.

6. COMPARISON WITH PRIOR SURVEYS

H-5834a (1935) 1:20,000

Prior survey H-5834a covers the entire area of the present survey. Generally, soundings are within 0.5 meters between the prior survey and the present survey, the prior survey being shoaler. Shoreline along East Bay and Blackwater Bay has remained relatively stable.

There are no AWOIS items which originate with this prior survey and fall within the common area.

H-10450 is adequate to supersede this prior survey within the common area.

7. COMPARISON WITH CHART

Survey H-10450 was compared with the following chart.

Chart	Edition	Date	Scale	Datum
11385SC	20th edition	November 23, 1991	1:40,000	NAD 83
11385SC	21st edition	September 25, 1993	1:40,000	NAD 83

The two editions listed above are identical except for the addition of piers along the northern shore of Blackwater Bay, and a group of piles in East Bay.

a. Hydrography

Charted hydrography originates with prior survey H-5834a and miscellaneous sources. Refer to the hydrographer's report, section N, pages 6 and 7, for a general comparison to the survey area.

Survey H-10450 is adequate to supersede charted hydrography within the common area.

b. AWOIS

AWOIS item 8340 originates with a miscellaneous source. The disposition of this AWOIS item can be found in the AWOIS item investigation write-up attached to the hydrographer's report.

c. Controlling Depths

Blackwater Bay Channel is located within the survey limits of survey H-10450 and has a controlling depth of 6.5 feet (2.0 meters). Survey depths found in Blackwater Channel are consistent with or deeper than the charted controlling depth. Survey depths found range from 2.1 meters (7.0 feet) to 3.0 meters (10 feet).

d. Aids to Navigation

There are ten fixed aids to navigation located within the survey area. They were adequately located and according to the hydrographer, serve their intended purpose. However, during office processing the USCG was notified of the survey positions which differ from those which are charted. See attached NOAA Form 76-40 for the revised positions.

There are no floating aids or features of landmark value located within the area of this survey.

e. Geographic Names

Names appearing on the smooth sheet and in the survey title have been approved by the Chief Geographer.

f. Dangers to Navigation

The hydrographer reported ten visible piles as dangers to navigation to the local United States Coast Guard District, DMAHTC or N/CG221, during the survey. Copies of these reports are attached to this report. The positions of several aids was reported to the USCG during office processing.

8 COMPLIANCE WITH INSTRUCTIONS

Survey H-10450 adequately complies with the Project Instructions.

9. ADDITIONAL FIELD WORK

This is a good hydrographic survey. No additional work is recommended.

R.N. Mihailov
Cartographer

APPROVAL SHEET
H-10450

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, cartographic symbolization, comparison with prior surveys and verification or disproval of charted data. The digital data have been completed and all revisions and processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts have been made and are included with the survey records. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Dennis J. Hill — Date: 6/23/94
Dennis J. Hill
Chief, Hydrographic Processing Unit
Pacific Hydrographic Section

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Douglas G. Hennick — Date: 6/23/94
Commander Douglas G. Hennick, NOAA
Chief, Pacific Hydrographic Section

****

Final Approval

Approved:

for J. Austin Yeager — Date: 2/7/95
J. Austin Yeager
Rear Admiral, NOAA
Director, Coast and Geodetic Survey

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-10450

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
11385	10/6/94	John Bart	~~Full~~ Part ~~Before~~ After Marine Center Approval Signed Via
			Drawing No. 22 APP'd critical corr's only
			At Proof Stage.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
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			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED