H-10522

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-10-16-93

Registery No.: H-10522

LOCALITY

State: Florida/Alabama

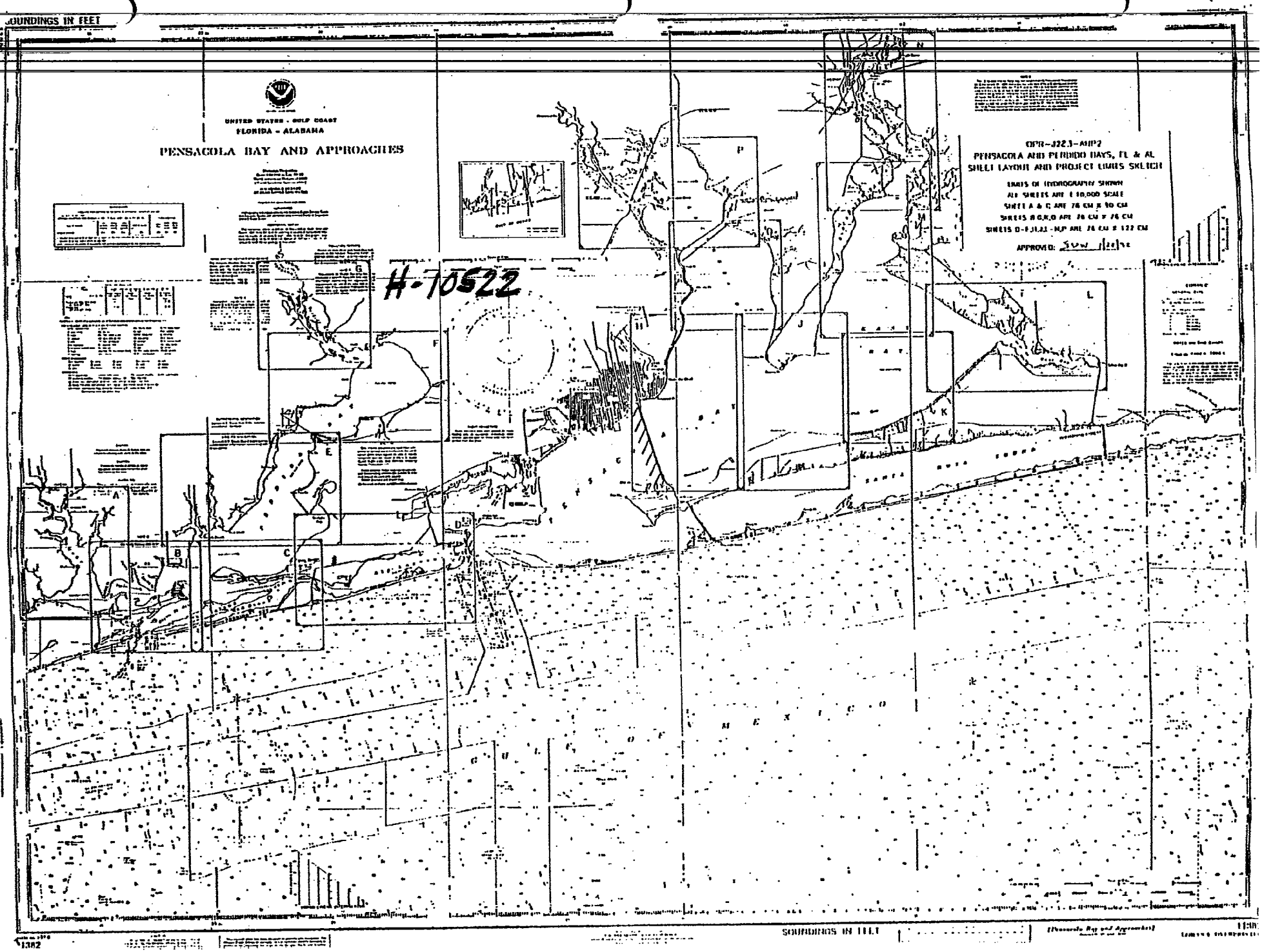
General Locality: Perdido River

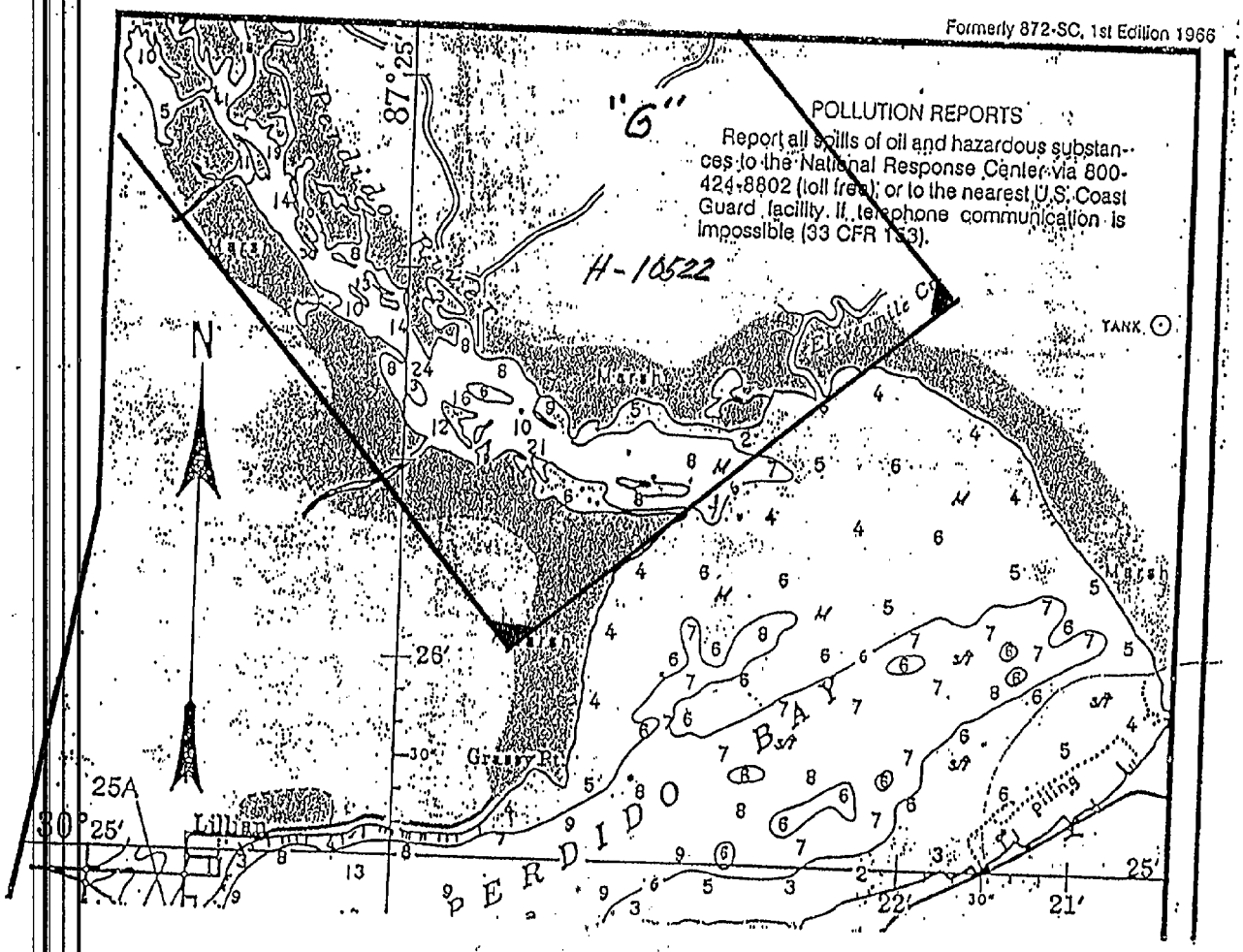
Sublocality: Elevenmile Creek to Blackwater River

1993

CHIEF OF PARTY
LCDR James E. Waddell, Jr., NOAA

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


SOUNDINGS IN FEET
UNITED STATES - GULF COAST
FLORIDA - ALABAMA
PENSACOLA BAY AND APPROACHES
H-10522
OPR-J323-AMP2
PENSACOLA AND PERDIDO BAYS, FL & AL
SHEET LAYOUT AND PROJECT LIMITS SKETCH
LIMITS OF HYDROGRAPHY SHOWN
APPROVED:
SOUNDINGS IN FEET



Perdido River Fl./Al.
Eleven Mile Creek to Blackwater River
H-10522
AHP-10-16-93
Sheet #28 "G"
OPR-J223

NOAA FORM 77-28 (11-72)

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

REGISTER NO.

H-10522

HYDROGRAPHIC TITLE SHEET

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

FIELD NO.

AHP-10-16-93

State: Florida/Alabama

General locality: Perdido River

Locality: Elevenmile Creek to Blackwater River

Scale: 1:10,000 Date of survey: Dec. 7-16, 1993

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

Vessel: AHP Launch 0518

Chief of party: LCDR James E. Waddell, Jr., NOAA

Surveyed by: David B. Elliott

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

Graphic record scaled by: D. Elliott, L. Martinez

Graphic record checked by: D. Elliott, L. Martinez

Verification by: R. Mayor Automated plot by: HP Design Jet Plotter

Evaluation by: I. Almacen

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

REMARKS: Time in UTC. Revisions and marginal notes in black were generated during office processing. Some separates are filed with the hydrographic data, as a result page numbering may be interrupted or non-sequential.

Surf/Awois check
10/20/95 MCR

10/18/95

U.S. GOVERNMENT PRINTING OFFICE: 1986 - 652-007/41215

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10522
FIELD NO. AHP2-10-16-93
SCALE: 1:10,000
1993
ATLANTIC HYDROGRAPHIC PARTY TWO
CHIEF OF PARTY: LCDR James E. Waddell Jr., NOAA

A. PROJECT ✓

This survey was conducted according to Hydrographic Project Instructions OPR-J223-AHP, Pensacola and Perdido Bays, Florida and Alabama, dated September 25, 1992, change No.1 dated January 4, 1993, and change No. 2 dated October ~~13~~ 4, 1993.

The purpose of project OPR-J223-AHP is to provide contemporary hydrographic surveys to update nautical charts in Pensacola and Perdido Bays, Florida. The area was last surveyed in 1935 by the Coast and Geodetic Survey using predominately lead line methods. The project area is traversed by vessels and barges containing, grains, soybeans, cypress logs, petroleum, seafood and various other products.

The sheet letter is "G" as specified by the project instructions.

B. AREA SURVEYED (See EVAL RPT, Sec B)

The area surveyed for H-10522 covers Perdido River, Florida and Alabama, from Eleven Mile Creek to Blackwater River. The approximate survey limits are as follows:

North: 30°~~31.0~~'N 30.4'
South: 30°~~26.5~~'N 26.7'
East: 087°~~19.0~~'W 22.1'
West: 087°~~23.0~~'W 27.3'

This survey was conducted from December 7, 1993 (DN 341) to December 16, 1993 (DN 350).

C. SURVEY VESSEL ✓

Vessel 0518 (EDP No. 0518), a 21-foot MonArk was used to collect all survey data. There were no unusual vessel configurations nor problems encountered.

D. AUTOMATED DATA ACQUISITION AND PROCESSING ✓

Version 4.03 of the PC-DAS programs was used for on-line data acquisition. A list of all HP-DPS programs and versions used for data processing can be found in the Appendix.* The NOS program VELOCITY (Ver. 2.0) and WordPerfect (Ver. 6.0) were also used during this survey.

E. SONAR EQUIPMENT ✓

Not Applicable.

F. SOUNDING EQUIPMENT ✓

A Innerspace model 448 depth sounder, S/N 175 was used to collect all echo soundings on this survey. The Innerspace echo sounder operates at 208 KHZ and has an 8° conical beam pattern.
A standard lead line calibrated in meters, S/N 0518, was used during this survey for comparison readings with the echo sounder. A Five-meter long, wooden sounding pole, constructed according to HSG No. 69, was used to obtain all pole soundings.

No problems were encountered with any of the sounding equipment.

G. CORRECTIONS TO ECHO SOUNDINGS ✓

Correctors for the velocity of sound through water were determined from the casts listed below:

Velocity Table No.	Cast No.	Deepest Depth(m)	Applicable DN	Cast Position	Day	
1	1	5.2	341-342	30°24'20"N 87°25'52"W	342	Plots outside sheet limits.
2	2	15.6	343	30°29'00"N 87°26'00"W	343	
3	3	13.0	347-350	30°29'00"N 87°26'00"W	350	

Corrections for the speed of sound through the water column were computed from data obtained with an Odom Hydrographic Systems Digibar (Model DB1100) speed of sound probe, S/N 155. This instrument was calibrated by the manufacturer on May 3, 1993 and data quality assurance tests were performed before each cast. Program VELOCITY was used for computing the speed of sound correctors. Speed of sound corrections were applied to the sounding plot using the HDAPS Reapply Depth Correctors function. Copies of the tables and support documentation are in the Survey Separates. *

* Filed with the hydrographic records.

Lead line comparisons were taken daily to determine echo sounder error. No echo sounder error was observed. The lead line comparison logs are in the Survey Separates.* The lead lines were calibrated using a steel tape on November 19, 1993 for launch 0518. No corrections were necessary. A copy of the calibration form is in the Survey Separates.*

A static draft of 0.3 meters was applied to the final sounding plot by the HDAPS Reapply Depth Correctors program. The draft was measured by subtracting the difference from a punch mark on the side of launch 0518, 0.6 meters above the transducer, to the water surface.

Settlement and squat measurements for launch 0518 were determined on November 19, 1993 (DN 323). These measurements were conducted at the Blue Angel Park piers in Perdido Bay, Florida, using the level method; Settlement and squat correctors were applied to the final sounding sheet using the HDAPS Reapply Depth Correctors function. Data from the settlement and squat test is in the Survey Separates.*

Predicted tides for this project were provided on diskette by N/OES231 for the Pensacola, Florida reference station (872-9840). Correctors for two different tidal zones on sheet G were provided. The south zone was the only one used due to constraints on DGPS positioning. Latitude 30°29.5′ divides the survey area into northern and southern zones. Tidal correctors are:

	Time(min.)		
	High Water	Low Water	Range Ratio
North Zone	+5:00	+5:00	X 0.65
South Zone	+4:30	+4:30	X 0.61

The correctors are designated in section 5.9 of the project instructions. Approved water levels were requested from the Product and Services Branch, Datums Section, N/OES231, in a letter dated January 8, 1993. A copy is included in Appendix V * of this report. Approved Tide Note dated May 11, 1994 is attached.

H. CONTROL STATIONS (See EVAL RPT, Sec. H)

The horizontal control datum for this project is the North American Datum of 1983. Two horizontal control stations, EDEN Condominium (004), and Cal2 (006) were used on this survey. These stations were established to 3rd-order standards with GPS by AHP personnel in November. The Horizontal Control Report for these positions was submitted to N/CG2333 on November 30, 1993. These positions served as our GPS base station site and also our launch performance checkpoint during work on this survey. Positions for these stations are shown in the Control Station list ~~in the Appendix of~~ included in this report.

Filed with the hydrographic records.

I. HYDROGRAPHIC POSITION CONTROL ✓

Differential GPS (DGPS) was used for all hydrographic data acquired on this survey. Ashtech M-XII receiver (S/N 700157E1075) and antenna (S/N 700271A0064) were used for the reference station. An Ashtech Sensor (S/N 700417B1070) with antenna (S/N 700378A0275) was used as the remote station on launch 0518. Tad model 150 VHF radios were used as the datalink between the base station receiver and the launch sensor. The primary GPS base station site (004) was set at the Eden Condominium on Perdido Key, Florida. Prior to using the Eden Condominium base station, the program MONITOR was run for this site to check its susceptibility to multi-path problems; this test indicated 100.0% availability at a 1:10,000 survey scale. Results of this test are included in the Survey Separates.*

Daily DGPS performance checks were conducted in accordance with FPM 3.4.4 by comparing the DGPS position of the vessel to our computed third-order position of Cal 2, in Lillian, Alabama. To obtain a performance check, the launch was brought alongside the checkpoint and the Easting, Northing, number of SVs, HDOP, and time of observation were noted on the echogram for each day of operations. These values were then entered into a Lotus spreadsheet table which would compute the acceptable error margin (based on the HDOP) and also our observed difference between our known and observed position. The table of these comparisons is included in the Survey Separates.* All of our observed differences fell well within the allowable limit.

J. SHORELINE (See EVAL RPT, Sec. J)

There was no final field sheet for H-10522, as this project was Team Processed with Pacific Hydrographic Section. The shoreline was transferred by hand from TP-00539 in blue ink on the field sheet. There were no shoreline changes noted with the exception of several soundings falling on shore where the vessel was controlled by GPS on the northern portion of the river. The GPS control was preferred over see field sheet. No shoreline changes were made based on this control method. Shoreline verification was accomplished during inshore hydrographic data acquisition and by visual inspection. The reference number descriptions, field notes, and explanations of new shoreline features are on the graphic record,* and on the (Boat) Field sheet. Charted shoreline should be retained and superseded only by new photography when available. TP-00539 (BP150100) appears to be the source for the charted shoreline. There were minor shoreline revisions found during survey operations ✓

K. CROSSLINES

A total of 3.4 linear nautical miles of crosslines were run, which represents approximately 10 % of the main scheme hydrography. Cross line soundings agree with the main scheme soundings within 0.2 meters. This survey's tidal zones were divided into two geographic locations and any unusual highs and lows were visually noted by launch operators during hydrography.

* Filed with the hydrographic records.

L. JUNCTIONS (See EVAL RPT, Sec. L)

This survey junctions with H-10521 to the southeast, a 1:10,000 scale survey from OPR-J223-AHP, 1993.

Junction soundings between this survey and H-10521 are in good agreement, with differences of 0.2 meters or less.

M. COMPARISON WITH PRIOR SURVEYS (See Eval Rpt, Sec. M)

See Pacific Hydrographic Section's Evaluation Report for H-10522.

N. ITEM INVESTIGATION REPORTS ✓

There were no AWOIS investigations assigned to H-10522. Concur.

O. COMPARISON WITH THE CHART (See EVAL RPT, Sec. O)

Comparison is made with the following charts:

Chart No.	Edition	Edition Date
11378	26th	Sept, 5, 1992
11382	34th	March 27, 1993

There were no dangers to navigation identified on this survey. Concur

Soundings from this survey are within 0.3 meters of those charted.

The portion of the river north of 30°29.5' was surveyed by GPS (Pos.467-504) and plotted in brown ink on the sounding plot. Correctors for DGPS could not be received in this area. There are only two soundings in this area shown on the chart.

The survey scale of this charted inset was 1:80,000.

Recommendation: The hydrographer recommends that sounding data from this survey be used to update the chart. Concur.

P. ADEQUACY OF SURVEY ✓

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

Q. AIDS TO NAVIGATION

There were no fixed or floating aids to navigation within the limits of survey H-10522. Concur.

R. STATISTICS ✓

Description	Quantity
Total Number of Positions	504
Total Lineal Nautical Miles of Hydrography	30.3
Total Lineal Nautical Miles of Cross Lines	3.4
Square Nautical Miles of Hydrography	2
Days of Production	5
Detached Positions	0
Bottom Samples	13
Tide Stations	2
Velocity Casts	3

S. MISCELLANEOUS ✓

Bottom samples were taken as directed in Section 6.7 of the Project Instructions. Bottom sample positions are plotted on the overlay submitted with this survey, and are listed on the Oceanographic Log Sheet-M, NOAA Form 75-44, which is included in the Survey Separates. *

No predicted tidal anomalies were observed during this survey.

There are no cable crossing areas located within the survey limits. Concur.

Traffic in this area is primarily fishing and recreational vessels with shallow draft.

T. RECOMMENDATIONS ✓

Future chart editions should have printed on them a reordering address and telephone number so when our customers wish to order the same or adjoining charts, they will not need to obtain a chart catalog. This eliminates a step in getting our product to the market place. Concur.

Filed with the hydrographic records.

U. REFERRAL TO REPORTS

Title	Transmittal Information
Descriptive Report to Accompany Survey H-10522,	Pacific Hydrographic Section N/CG245, Seattle, WA 1994
Horizontal Control Report for OPR-J223-AHP	Field Photogrammetry Section N/CG233, Seattle, WA(11/30/93)
Chart Sales Agent Report	Chart Distribution Branch N/CG33, Rockville, MD 1994
User Evaluation Report	Pacific Hydrographic Section N/CG245, Seattle, WA 1994
Chart Inspection Report	Pacific Hydrographic Section N/CG245, Seattle, WA 1994
Coast Pilot Report	Pacific Hydrographic Section N/CG245, Seattle, WA 1994

Submitted by: David B. Elliott
Edited by: Brian A. Link
Atlantic Hydrographic Party

HDAPS Pre-Survey Program Version: 7.04 PRE-SURVEY: CONTROL STATION TABLE 16:46:02 6 Jan 1994

Station No	Type	Lat	Lon	H	Cart	Freq	Vel Code	MM/DD/YY	Station Name
004	0	030:17:15.417	087:29:09.073	58	250	0.0	0	11/29/93	EDEN,1993(CONDO BASE STATION)
005	0	030:18:35.685	087:26:19.266	2	250	0.0	0	11/29/93	CAL 1,1993
0[illegible]	0	030:24:22.477	087:26:10.133	2	250	0.0	0	11/29/93	CAL 2,1993
		000:00:00.000	000:00:00.000	0	0	0.0	0	11/29/93	
		000:00:00.000	000:00:00.000	0	0	0.0	0	11/29/93	
		000:00:00.000	000:00:00.000	0	0	0.0	0	11/29/93	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	03/01/92	
		000:00:00.000	000:00:00.000	0	0	0.0	0	11/29/93	

APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY
OPR-J223-AHP
AHP2-10-16-93
H-10522
1993

This basic hydrographic survey was conducted in accordance with the project instructions for OPR-J223-AHP, 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 basic hydrographic survey for the area described in Section B of this report.

James Waddell Jr.
LCDR, NOAA
Chief, Atlantic Hydrographic Party

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10522

Name on Survey	A ON CHART NO. 11378 11382	B ON PREVIOUS SURVEY NO. H-5833	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 TP-00539	K	
ALABAMA										1
ALLIGATOR BAYOU									X	2
BLACK LAKE		X							X	3
BLACKWATER RIVER	X	X							X	4
CANEY BAYOU									X	5
CHAMBERS POINT									X	6
ELEVENMILE CREEK	X	X							X	7
FLORIDA										8
PERDIDO RIVER	X	X							X	9
REDFISH POINT									X	10
REEDER LAKE		X							X	11
~~TEE LAKE~~									~~X~~	~~12~~
~~WICKER LAKES~~									~~X~~	~~13~~
										14
										15
										16
				Approved:						17
				Charles E. Harrington						18
				Chief Geographer - N/CG2x31						19
										20
				MAR 22 1994						21
				Clinton C. Coy						22
										23
				OCT 20 1995						24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

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: May 11, 1994

MARINE CENTER: Pacific

HYDROGRAPHIC PROJECT: OPR-J223-AHP

HYDROGRAPHIC SHEET: H-10522

LOCALITY: Perdido River, Florida, Eleven Mile Creek to Blackwater River

TIME PERIOD: December 7 - 16, 1993

TIDE STATION USED: 872-9840 Pensacola, Fl.
Lat. 30° 24.2'N Lon. 87° 12.8'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 8.28 ft.
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.2 ft.

TIDE STATION USED: 872-9949 North Perdido River, U.S. Hwy. 90, Fl.
Lat. 30° 31.4'N Lon. 87° 26.6'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 2.76 ft.
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.8 ft.

TIDE STATION USED: 872-9962 Perdido Heights, Perdido Bay, Fl.
Lat. 30° 23.6'N Lon. 87° 25.5'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 2.52 ft.
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.7 ft.

H-10522 (continued)

REMARKS: RECOMMENDED ZONING

1. North of the confluence of Perdido River and Blackwater River, times and heights are direct on North Perdido River, Fl. (872-9949). When data is not available for North Perdido River, Fl., apply a +1 hour time correction and heights are direct on Perdido Heights, Fl. (872-9962). When data is not available for Perdido Heights, Fl., apply a +4 hour time correction, and a X0.63 range ratio to Pensacola, Fl. (872-9840).

2. South of the confluence of Perdido River and Blackwater River, apply a -30 minute time correction and heights are direct on North Perdido River, Fl.(872-9949). When data is not available for North Perdido River, Fl., apply a +30 time correction and all heights are direct on Perdido Heights, Fl. (872-9962). When data is not available for Perdido Heights, Fl., apply a +3 hour 30 minute time correction, and a X0.63 range ratio to Pensacola, Fl. (872-9840).

Note: Pensacola, Fl. (872-9840) and Perdido Heights, Fl. (872-9962) are used to provide data during periods when the station required for the survey area (Perdido River) had invalid data causing breaks in the series. Zoning correctors are based on general time and range differences. However, these may not represent conditions over the entire series. Also, river influences and localized meteorological conditions in Perdido River may have a different effect on the water levels from those of Perdido and Pensacola Bays. Therefore, data from stations outside the survey area should be used with caution.

Note: Times are tabulated in Central Standard Time.

William M. Stevenson

CHIEF, DATUMS SECTION

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

U.S. DEPARTMENT OF COMMERCE

HYDROGRAPHIC SURVEY STATISTICS

REGISTRY NUMBER: H-10522

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

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

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

SHORELINE DATA

SHORELINE MAPS (List):	
PHOTOBATHYMETRIC MAPS (List):	
NOTES TO THE HYDROGRAPHER (List):	
SPECIAL REPORTS (List):	
NAUTICAL CHARTS (List):	

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			504
POSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	50.0		
VERIFICATION OF SOUNDINGS	240.0		
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	26.0		
COMPARISON WITH PRIOR SURVEYS AND CHARTS			
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		18.0	
GEOGRAPHIC NAMES			
OTHER*			
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	316.0	18.0	

Pre-processing Examination by LT D. Haines	*Beginning Date* 12/16/93	*Ending Date* 2/10/95
Verification of Field Data by I.Almacen, L.Deodato, R.Mayor, J.Stringham, B.Olmstead	*Time (Hours)* 316.00	*Ending Date* 4/3/95
Verification Check by J. Stringham	*Time (Hours)* 4.0	*Ending Date* 5/16/94
Evaluation and Analysis by I. Almacen	*Time (Hours)* 18	*Ending Date* 6/30/95
Inspection by B.A. Olmstead	*Time (Hours)* 26	*Ending Date* 10/5/95

EVALUATION REPORT
H-10522

A. PROJECT

Project information is discussed in the hydrographer's report.

B. AREA SURVEYED

This survey was conducted in Perdido River, Florida/Alabama, covering the area from the mouth of the river and in the vicinity of Elevenmile Creek at latitude 30/26/42N up north to Blackwater River at latitude 30/30/24N. Depths range from 0.5 to 12.3 meters. The bottom consists primarily of mud and sand.

C. SURVEY VESSELS

Survey vessel information is found in the hydrographer's report.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

Survey data were processed using the same Hydrographic Data Acquisition/Processing System (HDAPS) software used by the hydrographer, the Hydrographic Processing System (HPS) and AutoCad, Version 12.

At the time of the survey certification the format for transmission of digital data had not been formally approved. In the interim, digital data for this survey exists in the standard HPS format which is a database format using the .dbf extension. In addition, the sounding plot, created with .dbf (extension) and enhanced using the AutoCad system, are filed both in the AutoCad drawing format, i.e., .dwg (extension); and in the more universally recognized graphics transfer format, .dxf. (extension). Copies of these files will be retained at PHS until data transfer protocols are developed and improved.

The drawing files necessarily contain information which is not part of the HPS data set such as geographic names text, line-type data, and minor symbolization. In addition, those soundings deleted from the drawing for clarity purposes, remain unrevised in the HPS digital files to preserve the integrity of the original hydrographic data set. Cartographic codes used to describe the digital data are those authorized by the Hydrographic Survey Guideline No. 75.

The field sheet parameters have been revised to center the hydrography on the office plot. Data is plotted using a Modified Transverse Mercator projection and are depicted on a single sheet.

E. SONAR EQUIPMENT

No side scan sonar was used on survey H-10522.

F. SOUNDING EQUIPMENT

Sounding equipment is discussed in the hydrographer's report.

G. CORRECTIONS TO SOUNDINGS

The sounding data have been reduced to Mean Lower Low Water (MLLW). The reducers include corrections for actual tide, dynamic draft, and sound velocity. These reducers have been reviewed and are consistent with present NOS specifications. Actual tide reduction is derived from North Perdido River, Florida gage (872-9949), Perdido Heights, Florida gage (872-9962) and Pensacola, Florida gage (872-9840).

H. CONTROL STATIONS

Control stations are discussed in the hydrographer's report and separates. A list of control stations used on survey H-10522 is attached to this report.

The positions of horizontal control stations used during hydrographic operations are field values based on NAD 83. The geographic positions of all survey data are also based on NAD 83. The smooth sheet is annotated with an NAD 27 adjustment tick based on values determined with the NGS program NADCON.

Data based on NAD 27 may be referenced to this survey by applying the following corrections:

Latitude:	0.707 second	(21.786 meters)
Longitude:	-0.080 second	(-2.124 meters)

I. HYDROGRAPHIC POSITION CONTROL

Differential GPS (DGPS) was used to control this survey with the exception of the section of the river north of latitude 30/29/00N. A horizontal dilution of precision (HDOP) not to exceed 3.75 was computed for survey operations. No positions exceeded this limit south of latitude 30/29/00N. Non-differential GPS was used to control hydrography along the upper reaches of Perdido River. GPS pseudorange correctors could not be received in this remote area of the river during the time of the survey. The soundings obtained on this particular area were plotted along the approximate center of the river and the positions of the plotted soundings were digitized as depicted on the smooth sheet. This data appears to be consistent with the photogrammetric shoreline and surrounding depth information.

J. SHORELINE

The applicable shoreline manuscript for this survey is TP-00539 (BP150100), compiled at the scale of 1:20,000 and photographically enlarged to the survey scale of 1:10,000. Except for some minor erosion along the banks of the river, no significant shoreline changes were noted during this survey. A minor shoreline revision has been shown in dashed red at latitude 30/28/15N, longitude 87/25/42W. This revision is considered acceptable to supersede the photogrammetric data in the common area.

K. CROSSLINES

Crosslines are discussed in the hydrographer's report.

L. JUNCTIONS

Survey H-10522 junctions with the following survey.

Survey	Year	Scale	Area
H-10521	1993-94	1:10,000	Southeast

The junction with survey H-10521 is complete and the soundings are in satisfactory agreement.

M. COMPARISON WITH PRIOR SURVEYS

H-5833 (1935) 1:20,000

Survey H-5833 was the only survey of the river undertaken by the USC&GS since 1935. The sounding agreement is satisfactory, however, the present survey appears to be generally shoaler in some areas by about 0.3 meter (1 ft.) particularly along the small tributaries of Perdido River. The shoaling could be attributed to soil erosion along the river banks .

H-10522 is adequate to supersede the prior survey within the common area.

N. ITEM INVESTIGATIONS

There were no item investigations assigined within the area of this survey.

O. COMPARISON WITH CHART

Survey H-10522 was compared with the following chart.

Chart	Edition	Date	Scale
11378	27th	May 7, 1994	1:80,000

a. Hydrography

Charted hydrography originates with the previously mentioned prior survey and miscellaneous sources and requires no further discussion.

Survey H-10522 is adequate to supersede charted hydrography within the common area of coverage.

P. ADEQUACY OF SURVEY

Except as noted in section I of 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.

This is an adequate hydrographic survey and no additional work is recommended.

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 Procedure Manual, April 1994 Edition.

Survey H-10522 adequately complies with the project instructions.

Q. AIDS TO NAVIGATION

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

R. STATISTICS

Statistics are itemized in the hydrographer's report.

S. MISCELLANEOUS

Refer to the hydrographer's report for miscellaneous information related to this survey. No

additional miscellaneous items were noted during office processing of this survey.

T. RECOMMENDATIONS

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

U. REFERRAL TO REPORTS

Referral to reports is discussed in the hydrographer's report.

Isagani A. Almacen
Cartographer

APPROVAL SHEET
H-10522

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.

Bruce A. Olmstead Date: 10/10/95
Bruce A. Olmstead
Senior Cartographer, Cartographic Section
Pacific Hydrographic Branch

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.

Kathy Timmons Date: 10/10/95
Kathy Timmons
Commander, NOAA
Chief, Pacific Hydrographic Branch

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Final Approval

Approved:

Andrew A. Armstrong III Date: 10/20/95
Andrew A. Armstrong III
Captain, NOAA
Chief, Hydrographic Surveys Division

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-10522

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
. Letter all information.
. In "Remarks" column cross out words that do not apply.
. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
11378	10/10/95	Russ. Davies	Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via Full application of
			Drawing No. soundings and features from smooth sheet.
			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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SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.