

H10901

NOAA FORM 76-35A

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

## DESCRIPTIVE REPORT

*Type of Survey* Hydrographic/Side Scan Sonar

*Field No.* WH-10-5-99

*Registry No.* H10901

### LOCALITY

*State* Florida

*General Locality* North Atlantic Ocean

*Locality* Approaches to St Johns River

1999

CHIEF OF PARTY  
LCDR John W. Humphrey

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DATE MAR 21 2001  
FEB 21 2001

REGISTRY NUMBER:

H10901

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 NUMBER:

WH-10-5-99

State: Florida

General locality: North Atlantic Ocean

Locality: Approaches to Jacksonville ST-JOHNS RIVER

Scale: 1:10,000 Date of survey: June 6, 1999-June 27, 1999

Instructions dated: August 26, 1998 Project Number: OPR-G354-WH

Vessel: NOAA Ship WHITING

Chief of Party: LCDR John W. Humphrey

Surveyed by: LCDR J.W. Humphrey, LT T. Haut, LT L. Krepp, ENS G. Imahori, ENS M. Moser, U.L. Gardner, P.G. Lewit, K.D. Kemp, C.H. Clemens, E.S. Baum

ings taken by echo sounder, hand lead-line, or pole: Odom Echotrac DF200MKIIr

Graphic record scaled by: WHITING Personnel

Graphic record checked by: WHITING Personnel

Protracted by: N/A Automated plot by: HP 750C (FIELD)

Verification by: Hydrographic Surveys Branch PERSONNEL

Soundings in: Feet: \_\_\_ Fathoms: \_\_\_ Meters: (\*) at MLW: \_\_\_ MLLW: (\*): \_\_\_

Remarks: Time Zone Used, 17 (UTC)

Basic Hydrographic and 200% Side Scan Sonar

HANDWRITTEN NOTES IN THE DESCRIPTIVE REPORT WERE MADE DURING OFFICE PROCESSING.

NEWOIS/SURPV 8/6/01 SJV

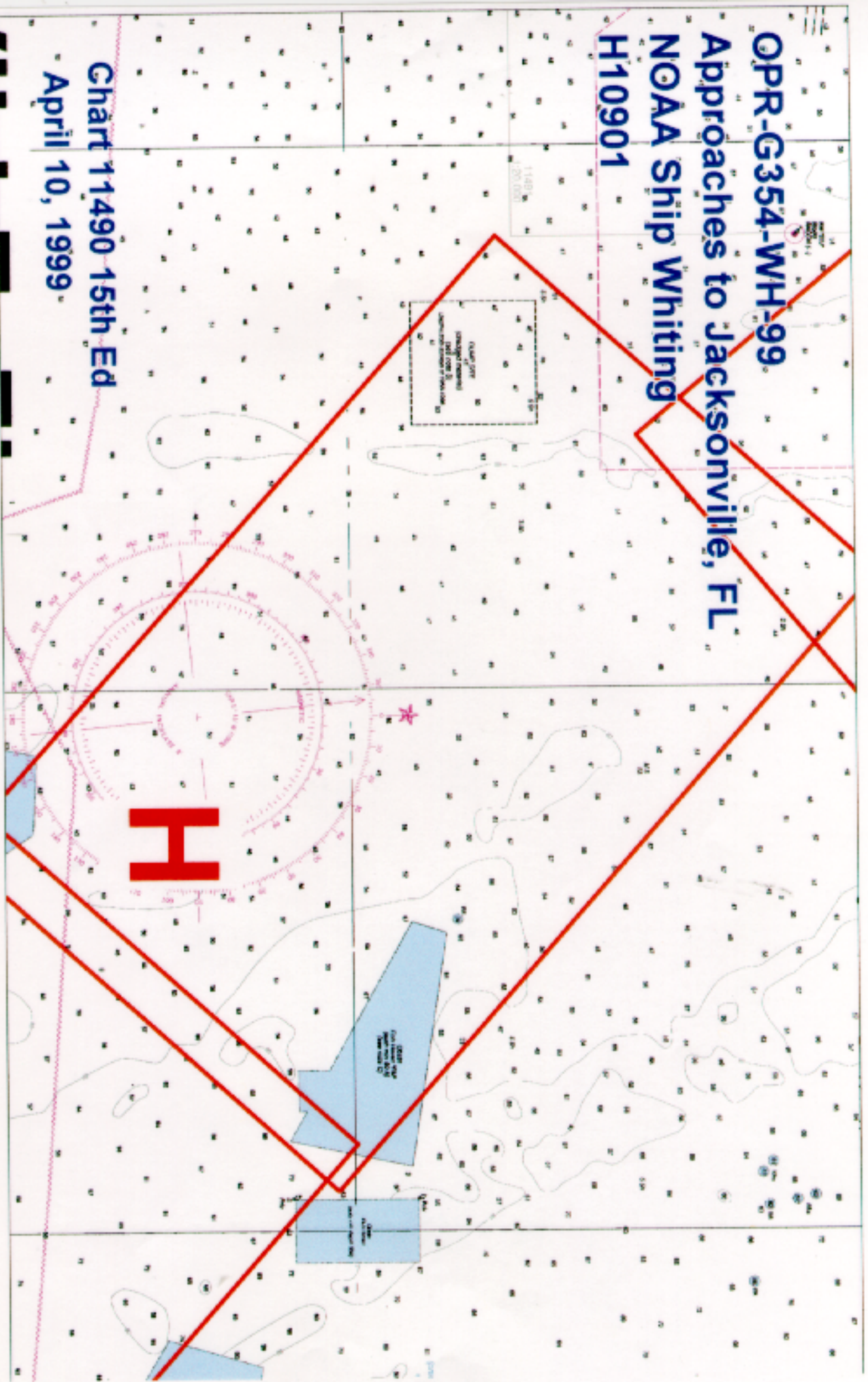
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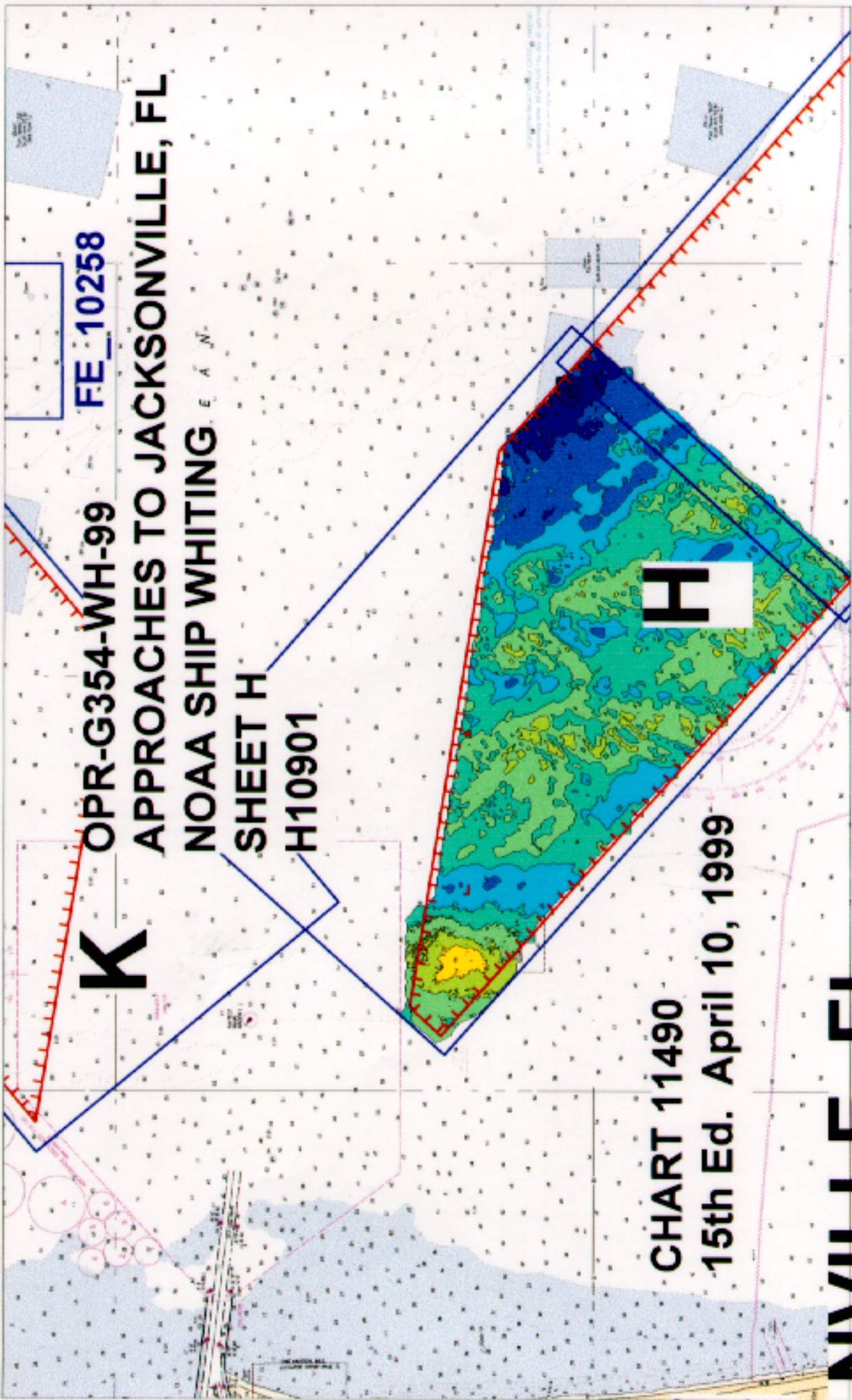
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*\* FILED WITH THE ORIGINAL FIELD RECORDS.*

**OPR-G354-WH-99**  
**Approaches to Jacksonville, FL**  
**NOAA Ship Whiting**  
**H10901**

**Chart 11490 15th Ed**  
**April 10, 1999**





**K**

**FE\_10258**

**OPR-G354-WH-99**

**APPROACHES TO JACKSONVILLE, FL**

**NOAA SHIP WHITING**

**SHEET H**

**H10901**

**H**

**CHART 11490**

**15th Ed. April 10, 1999**

**JACKSONVILLE, FL**

## **A. PROJECT**

A.1. This survey was conducted in accordance with Hydrographic Project Instructions OPR-G354-WH-99, basic hydrographic surveys, of approaches to Jacksonville, Florida.

A.2 The original instructions are dated May 4, 1999.

A.3 No changes were introduced to the instructions for Jacksonville, Florida up to this date.

A.4 This Descriptive Report covers H10901 (sheet "H") of OPR -G354-WH-99. H10901 lies 6.3 NM SW of ST. John's Inlet in Mayport, Florida. See section B.1 for exact survey boundaries.

A.5 Project OPR-G354-WH responds to requests from the Jacksonville Waterway Management Council. The council is concerned that enhancement and construction of artificial reefs in the approaches to St. Johns River will reduce detail on NOS charts covering the area. This area is host to U.S. Naval vessels, commercial deep-draft vessels and tugs engaged in towing operations.

## **B. AREA SURVEYED**

B.1 This survey covers the navigable area 6.3 NM SW of ST. John's Inlet in Jacksonville, FL. The survey comprises one sheet with the following boundaries, starting at the NE corner and proceeding clockwise:

### Sheet "H":

1. 30° 24.12.65' N 081°16" 02.22' W
2. 30°19" 52.22' N 081°10" 21.91' W
3. 30°16" 49.09' N 081°13" 31.97' W
4. 30°21" 11.59' N 081°19" 09.79' W

B.2 Data collection for this survey began on June 6, 1999 (DN 125). Data collection ended on June 25, 1999 (DN 176).

### C. SURVEY VESSELS

C.1 The following vessels were used during this survey:

Vessel	EPD Number	Primary Function
NOAA Ship Whiting	2930 (WTEW)	Hydrography and Side Scan Operations
NOAA Launch 1014	2932	Hydrography, Side Scan and Diving Operations

C.2 No unusual vessel configurations were used during this survey.

### D. AUTOMATED DATA ACQUISITION AND PROCESSING

*SEE ALSO THE  
EVALUATION REPORT*

D.1 All software used for data acquisition and processing are contained on the **HYDROSOFT** compact disc provided by Pacific Hydrographic Branch (N/CS34).

D.2 The SEABIRD SBE-19 sound velocity profile unit was utilized with **SEASOFT** and **SEACAT** software. The program **Velociwin** was used to process the collected data and calculate velocity corrections.

### E. SONAR EQUIPMENT

E.1 The **WHITING** and its launches conducted all side scan sonar operations using an **EG&G Model 260** image-corrected side scan sonar recorder and a **100 kHz Model 272-T** towfish.

E.2 The towfish was configured with a **20°** beam depression, which is the normal setting and yields the optimum beam correction.

E.3 High frequency (**100 kHz**) was used throughout the survey.

E.4 a. During survey preparation, it was determined that the depth of water in the survey area would require one range scale to cover the entire sheet. This range scale was used to obtain complete (**200%**) area coverage and provide optimal contact resolution. A range scale of **100 meters** was used with a line spacing of **80 meters**. The line spacing is in accordance with the value specified in section 6.4 of the **Field Procedures Manual (FPM)**. Data collected with an **EPE** of **30** or greater was rejected or smoothed during processing.

processing, so the maximum line spacing was never exceeded.

E.4 b. Confidence checks were obtained during passes by bottom features such as sand waves, scours and substrate density changes. These features were annotated on the sonargram.

E.4 c. All holidays regardless of length were covered with 200% side scan sonar. All side scan coverage was checked with swath plots to ensure proper overlap between adjoining lines. All relevant and questionable contacts were investigated using a reduced side scan range scale.

E.4 d. There were no degraded data returns collected during this survey.

E.4 e. On NOAA Ship WHITING, the SSS towfish was deployed from a Reuland winch using one of two armored cables in conjunction with an A-frame on the stern. The armored cable was connected to the SSS recorder by a slip-ring assembly. On launches 1014 the SSS towfish was deployed using a Superwinch in conjunction with an adjustable davit arm on the stern. The SSS towfish was towed with a vinyl-coated Kevlar cable and was connected to the recorder by a slip-ring assembly.

E.5 Significant side scan sonar contacts were investigated using side scan sonar at a reduced range scale. Singlebeam echosounder was also utilized for contact investigation. Development survey lines were routinely run with side scan sonar at 75-meter range scale. Detailed descriptions of all investigated contacts falling within the Navigable Area are addressed in the ITEM INVESTIGATION REPORTS found in section M.

E.6 All overlap was checked and holidays identified during processing using **HPS\_MI**, a MapBasic program provided by Hydrographic Surveys Division (N/CS32) to accompany **MapInfo** software.

## **F. SOUNDING EQUIPMENT**

F.1 All hydrographic soundings were acquired using a ODOM ECHOTRAC DF3200 MKII precision survey echo sounder

Vessel	EDP Number	ECHOTRACK S/N
NOAA Ship WHITING	2930 (WTEW)	A008303
NOAA Launch WH-2	2932 (1014)	A008304

F.2 Diver investigation utilized two Digital Pressure Gage-D2000 (s/n 68332 and 68338). No other sounding equipment was used.



F.3 There were no faults in sounding equipment that affected the accuracy or quality of the data.

F.4 Both high (100 kHz) and low (24 kHz) frequency sounding data were recorded during data acquisition. Only high frequency soundings were plotted.

## **G. CORRECTIONS TO SOUNDINGS**

### **G.1 a. Sound Velocity Correctors**

The velocity of sound through water was calculated using a Sea-Bird SBE 19 SEACAT Profiler (s/n 196093-1060). A Data Quality Assurance Test was conducted after the velocity cast to ensure that the unit was operating within tolerance. The Seacat Profiler was calibrated January 14, 1999 by SEA-BIRD ELECTRONICS, INC.

All sound velocity data were processed using program **VELOCIWIN**. Computed velocity correctors were entered into the HPS sound velocity table and re-applied during processing to both high and low frequency soundings.

The following is a list of sound velocity casts performed for H10901:

Cast #	Velocity Table Number	Day	Vessel Number	Position of Cast		Days Covered
				Latitude	Longitude	
12	20	161	2930	30°20'15"N	081°12'40"W	157-168
12	21	161	2931/2932	30°20'15"N	081°12'40"W	157-168
15	27	173	2930	30°20'00"N	081°12'36"W	173-178
15	28	173	2931/2932	30°20'00"N	081°12'36"W	173-178

b. Leadline Comparison

Dual Leadline comparisons for the ECHOTRAC DF 3200 MKII were conducted for WHITING during OPR-G354-WH-99 (H10901) on DN 137. The location of the check was at Mayport Naval Air Station (30°23'27"N and 081°24'40"W (8.4 m depth). In addition, leadline comparisons were done on launch 1014 on DN 147. The location of the check for launch 1014 was at St. John's River (30°19'12"N and 081°37'24"). The Digital Instrument Corrector had an average of 0.27 for vessel 2930 and for 1014 a high of 0.21 and a low of 0.15.

Weather and sea conditions were calm and proved ideal for performing the leadline comparison. No corrections to soundings were needed. Leadlines used were calibrated on May 17, 1999, and the calibration confirmed that the leadline error was negligible. See the fathometer record\* on the above listed days for actual ECHOTRAC DF 3200 MKII readings.

c. Static Draft

On July 28, 1993 the static draft correction was 0.55 meters for launch 1014. This value was entered into HPS Offset Table 2. The correction for vessel 2930 was 3.2 meters, which was measured while the ship was in Mayport Naval Station May 3, 1999. The corrector was entered into Offset Table 9. Static draft correctors were applied during data processing for each survey platform.

d. Dynamic Draft (Settlement and Squat Correctors)

Settlement and squat values for WHITING were determined on April 19, 1999 at the Craney Island fuel pier, and were entered into HPS Offset Table 9. The settlement and squat correctors were applied to the sounding data in real time. Refer to Separates section I for data records.\* The settlement and squat values for launch 1014 were determined March 16, 1998 and entered into offset tables 2 and 1 respectively.

e. Heave, Roll, and Pitch Correctors

Heave correctors for data acquired by WHITING were determined by a TSS Dynamic Motion Sensor DMS-05. Heave correctors were collected during data acquisition and applied to raw data during the HPTools conversion process. Serial numbers for these sensors were as follows:

\* FILED WITH THE ORIGINAL FIELD RECORDS.

Vessel	Serial Number
2930	2066
2932	2068

G.2 No correctors for diver lest depth gauges were used. See Appendix E for calibration information.

G.3 Tide Correctors

a. The tidal datum for this project is Mean Lower Low Water (MLLW). Soundings are referenced to MLLW. The operating tide station at Mayport, Florida (872-0220) served as control for datum determination.

B. Tidal zones are controlled by one primary gauge, Mayport, Florida (872-0220). Due to the limitations of HPS and for ease of data processing, one tide zone was used for each field examination item, using the tide application utility in HPTools. All proper zones will be applied through HPS upon receipt of smooth tides from N/OES234. See following page for location of all zones for H10901. The following table shows all tide zones used for H10901:

Zone Name	Time Corr. (min)	Ratio Corr.	Reference
Temp 1	-30	1.15	8720220

Smooth tides for H10901 were requested from N/OES234 in a letter dated July 14, 1999.

Zoning for this project is consistent with the project instructions.

*APPROVED TIDES AND ZONES WERE APPLIED DURING OFFICE PROCESSING.*

**H. HYDROGRAPHIC POSITION CONTROL**

*SEE ALSO THE EVALUATION REPORT.*

H1. The horizontal datum for this survey is the North American Datum of 1983 (NAD 83). No horizontal control stations were established for this survey.

H2. This survey was conducted using the Global Positioning System (GPS) corrected by the U.S. Coast Guard (USCG) Differential GPS reference station network. The ship used a Ashtech Sensor GPS receiver with a CSI MBX1 beacon receiver supplying USCG correctors for DGPS navigation. Ashtech receivers were automatically initialized by HSDutils and the CSI MBX1 units were preset to the appropriate station and frequency.

H3. The geographic positions for the DGPS stations used during this survey are as follows:

Location	Latitude	Longitude	Frequency
Charleston, SC	32° 45.50' N	079° 50.60' W	298 KHZ
Cape Canaveral, FL	28° 27.60' N	080° 32.60' W	289 KHZ

H.5 a. Accuracy requirements were met as specified by the Hydrographic Manual and Field Procedures Manual (FPM). The Horizontal Dilution of Precision (HDOP) and Expected Position Error (EPE) specified by the FPM were monitored during on-line data collection. If the positioning degraded beyond the acceptable limits while on-line, the data were either smoothed or rejected.

H. 5 b. DGPS performance checks for the WHITING, launch 1014 were conducted while secured in the WHITING davits using correctors from the Cape Canaveral, FL or Charleston, SC DGPS towers. Simultaneous HYPACK positions were compared between vessels. An offset in distance and azimuth was then calculated between the ship and launch systems. A summary of the DGPS performance checks is included in Appendix G.\* All DGPS performance checks confirmed that the equipment was working properly.

H6. Differential GPS Equipment: The serial numbers of the Ashtech Sensor and CSI MBX1 receivers on the data acquisition platform are as follows:

*\*FILED WITH THE ORIGINAL FIELD DATA*

Vessel	Device	Serial Number
2930 (WTEW)	Ashtech Sensors	700417B1203 (system A) 700417B1191 (system B)
	CSI MBX1	X-1318 (system A) X-1081 (system B)
2932 (1014)	Ashtech Sensor CSI MBX1	700417B1055 X-1079

H.7 a. There were no unusual methods used to operate or calibrate electronic positioning equipment.

H.7 b. There were no equipment malfunctions.

H.7 c. No unusual atmospheric conditions affected data quality.

H.7 d. No systematic errors were detected which required adjustments.

H.7 e. The maximum allowed HDOP value of 4.0 was never exceeded.

H.7 f. DGPS antenna offsets were measured on March 19, 1993, and verified on April 15, 1999 for WHITING. Offsets and laybacks were measured using the high frequency echosounder transducer as the reference. Correctors were entered into Offset Table 9. A minimum of four satellites were used during survey H10901 providing altitude unconstrained positioning.

H.7.g. Offset, layback and height for WHITING's A-frame was measured on March 18, 1998, using the forward high frequency transducer as the reference. Correctors were entered into Offset Table 9. Offset, layback and height corrections for the launches aft towing boom were measured on July 28, 1993, verified on April 15, 1999, and applied by HPS during processing. Correctors were entered into Table 2 for launch 1014. These offsets, along with the cable length, towfish height, and depth of water, were used by the HPS system to compute the position of the towfish. Copies of HPS Offset Tables 1, 2 and 9 are contained in the Appendix F. *FILED WITH THE ORIGINAL FIELD DATA*

## **I. SHORELINE**

No shoreline is contained within the boundaries of this survey.

## **J. CROSSLINES**

J.1. A combined total of 20.22 linear nautical miles of crosslines were acquired for this survey representing 5.69 % of the 354.87 calculated linear nautical miles of mainscheme hydrography.

J.2. A plot of all main scheme soundings in feet, superimposed with cross lines, was used to conduct main scheme-to-cross line comparisons. Soundings at intersections were compared to all other soundings within a 5-mm (50-meter) radius. Based on this procedure, agreement between main scheme and cross line soundings were found to be excellent. The majority of compared soundings fell within 1 to 2 feet of each other.

## **K. JUNCTIONS** *SEE ALSO THE EVALUATION REPORT.*

K.1 On its southeastern edge, survey H10901 (sheet "H") junctions with survey H10885 (sheet "T"). H10885 is a 1:10,000 scale survey of OPR-G354-WH.

K.2 A comparison of data collected on H10901 to that on H10885 proved no significant differences between soundings exist. Generally agreement was excellent, with an occasional 1 to 2 foot difference. *CONSIDER*

## **L. COMPARISON WITH PRIOR SURVEYS** *SEE ALSO THE EVALUATION REPORT*

L.1 A comparison with prior surveys is not required for this survey due to the completion of 200% SSS coverage.

**M. ITEM INVESTIGATION REPORTS**

**Contact Number: 41159.1p**

**Item Description:** 3 Hybrid Jets/Helicopters

**Source:** N/A

**AWOIS Position:** N/A

**Required Investigation:** N/A    **Radius:** None

**Charts Affected:** 11490, 11488

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**INVESTIGATION**

**Date(s):** 22 May 1999

**Position Numbers:** 23718

**Investigation Used:** DI, S2

**Surveyed Position:** Lat. 30°17'11.<sup>86</sup>9"N    Lon. 081°13'33.<sup>23</sup>2"W

**Position Determined By:** Differential GPS

**Investigation Summary:** During mainscheme hydrography, target number 41159.1p was covered with 200% side scan sonar. Significant contacts were found at the reported position. Divers investigated and found three hybrid Jets/helicopters with the wings and rotors removed. Least depth was taken atop the shoalest fuselage.

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**CHARTING RECOMMENDATION**

**Recommendation:** Based on the results of this survey, the hydrographer recommends charting an "obstruction" with a least depth of 42.7 (13.3m) ~~rotors~~ <sup>rotors</sup> based on predicted tides. The current charted depth is 49 feet on chart 11490 edition. *SEE ALSO SECTION N.2. OF THE EVALUATION REPORT*

*GRM  
3-21-01*

*CHART 11490, OBSTN*

The following contacts were located during the course of survey operations. Upon development at reduced range scale, the contacts were determined to be insignificant.

<b>Contact Number</b>	<b>Position</b>	<b>Dev. Day #</b>
44485.5p	30°20'26.5" N 081°17'42.3" W	160
44481.1p	30°20'20.9" N 081°17'36.5" W	160
44478.1p	30°20'18.5" N 081°15'09.5" W	160
41921.1s	30°20'44.6" N 081°17'03.3" W	159



**N. COMPARISON WITH THE CHART**

*SEE ALSO THE EVALUATION REPORT*

*FOUR*  
N.1 ~~Six~~ charts are affected by this survey(H10877):<sup>901</sup>

Chart 11009  
"Cape Hatteras to Straits of Florida"  
34<sup>th</sup> Ed. 03 May, 1993  
Scale 1:1,200,00

Chart 11480  
"Charleston Light to Cape Canaveral"  
35<sup>th</sup> Ed. May 9 1998  
Scale: 1:449,659

Chart 11488  
"Amelia Island to St. Augustine"  
22<sup>st</sup> Ed. May 15, 1999  
Scale: 1:80,000

Chart 11490  
"Approaches to St. Johns River"  
15<sup>th</sup> Ed. April 10<sup>th</sup>, 1999  
Scale: 1:40,000

**N.2 Dangers to Navigation**

N.2 a. There is one danger to navigation report for this area. See attached *APPENDED TO THIS REPORT.*

N.3 a. In general, survey soundings gathered for project G 354-99 showed roughly an overall difference of 1-3 foot for sheet "H" ( in comparison to chart 11490).

However, there are two areas where there are discrepancies shown in the table below.

Latitude	Longitude	Sounding Appearing on Chart (ft) 15 <sup>th</sup>	Fix(es) # (DN)	Survey Depths (ft)
30°20'49.99" N	081°16'17.26" W	45	24,527-8 (178) 46,065(160)	53
30°20'49.86" N	081°15'08.29" W	45	49,697-8 (164)	55

Both soundings found on chart 11490 Ed. 15<sup>th</sup> Ed. April 10<sup>th</sup>, 1999 were disproven by splits or developments made in these areas.

N.3 b. In addition, hydro splits were done on an active dump site with the following boundary going counterclockwise from the top right corner.

Latitude	Longitude
30°21'23.64" N	081°17'25.45" W
30°21'30.81" N	081°18'17.43" W
30°21'30.79" N	081°18'33.7" W
30°20'56.3" N	081°18'33.67" W
30°20'30.5" N	081°18'00.4" W
30°20'30.52" N	081°17'25.44" W

It was determined through conversations with N/CS33 that 25 meter echosounder line spacing would be adequate for this area.

**O. ADEQUACY OF SURVEY** *SEE ALSO THE EVALUATION REPORT.*

This survey is complete and fully adequate to supersede prior survey data within common areas.

**P. AIDS TO NAVIGATION**

There are no aids to navigation within the survey limits of H10901.

**Q. STATISTICS**

Q.1	a. Number of Non-Rejected Positions . . . . .	22,306
	b. Linear Nautical Miles of Sounding Lines:	
	Nautical Miles Hydrography . . . . .	110.97
	c. Linear Nautical Miles of side scan sonar . . . . .	384.61
	d. Square nautical miles of side scan sonar . . . . .	15.908
Q.2	a. Days of data acquisition . . . . .	15
	b. Detached Positions . . . . .	1
	c. Bottom Samples . . . . .	29
	d. Velocity Casts . . . . .	4
	e. Tide stations installed . . . . .	0

**R. MISCELLANEOUS** *SEE ALSO THE EVALUATION REPORT.*

R.1 No additional information

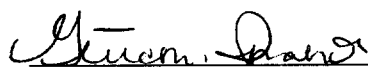
**S. RECOMMENDATIONS**

S.1 No further survey work is recommended.

**T. REFERRAL TO REPORTS**

No reports or data are referred to in this Descriptive Report that are not included with this survey.

This report and the accompanying field sheets are respectfully submitted.

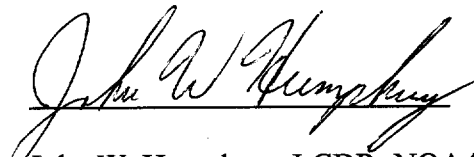
  
\_\_\_\_\_  
Gretchen Imahori, ENS, NOAA  
Junior Officer

**APPENDIX K**

**APPROVAL SHEET**

Field operations contributing to the accomplishment of this basic hydrographic survey were conducted under my direct supervision with frequent personal checks of progress and adequacy. All field sheets and reports were reviewed in their entirety and all supporting records were reviewed in their entirety and all supporting records were checked as well.

This survey is more than adequate to supersede ALL prior surveys in common areas. This survey is considered complete and adequate for nautical charting.

A handwritten signature in cursive script, reading "John W. Humphrey". The signature is written in black ink and is positioned above a horizontal line.

John W. Humphrey, LCDR, NOAA  
Commanding Officer  
NOAA Ship WHITING



**UNITED STATES DEPARTMENT OF COMMERCE**

National Oceanic and Atmospheric Administration  
Office of NOAA Corps Operations  
NOAA Ship WHITING S-329  
439 W. York Street  
Norfolk, VA 23510-1114

Commander (oan)  
Seventh Coast Guard District  
Brickell Plaza Building  
909 SE 1<sup>st</sup> Avenue  
Miami, Florida 33131-3050

Dear Sir,

While undergoing hydrographic survey operations at the approaches to Jacksonville, Florida, (project OPR-G354-WH-99, registry H10901) the NOAA Ship WHITING discovered an item identified as a hazard to navigation. I recommend that this item be included in the next Local Notice to Mariners. This item was located using Differential GPS and is based on the NAD83 datum. The soundings have been reduced to mean Lower Low Water (MLLW) using predicted tides. All depth data are preliminary pending actual tides.

Depth	Geographic Position	
	Latitude	Longitude
42.7	30° 17' 11.9" N	081° 13' 33.2" W

**Affected Charts:**

Chart Number	Edition Number	Date	Horizontal Datum
11490	15 <sup>th</sup>	April 10, 1999	NAD83
11488	22 <sup>nd</sup>	May 15, 1999	NAD83

The attached chartlet depicts the item in the fish haven "JW" which has an authorized minimum of 50'.

Questions concerning this report should be directed to the Atlantic Hydrographic Branch by calling 757-441-6746.

Sincerely,

John W. Humphrey, LCDR, NOAA  
Commanding Officer, NOAA Ship Whiting



**OPR-G354-WH-99**  
**Approaches to Jacksonville, FL**  
**NOAA Ship Whiting**  
**H10901\***

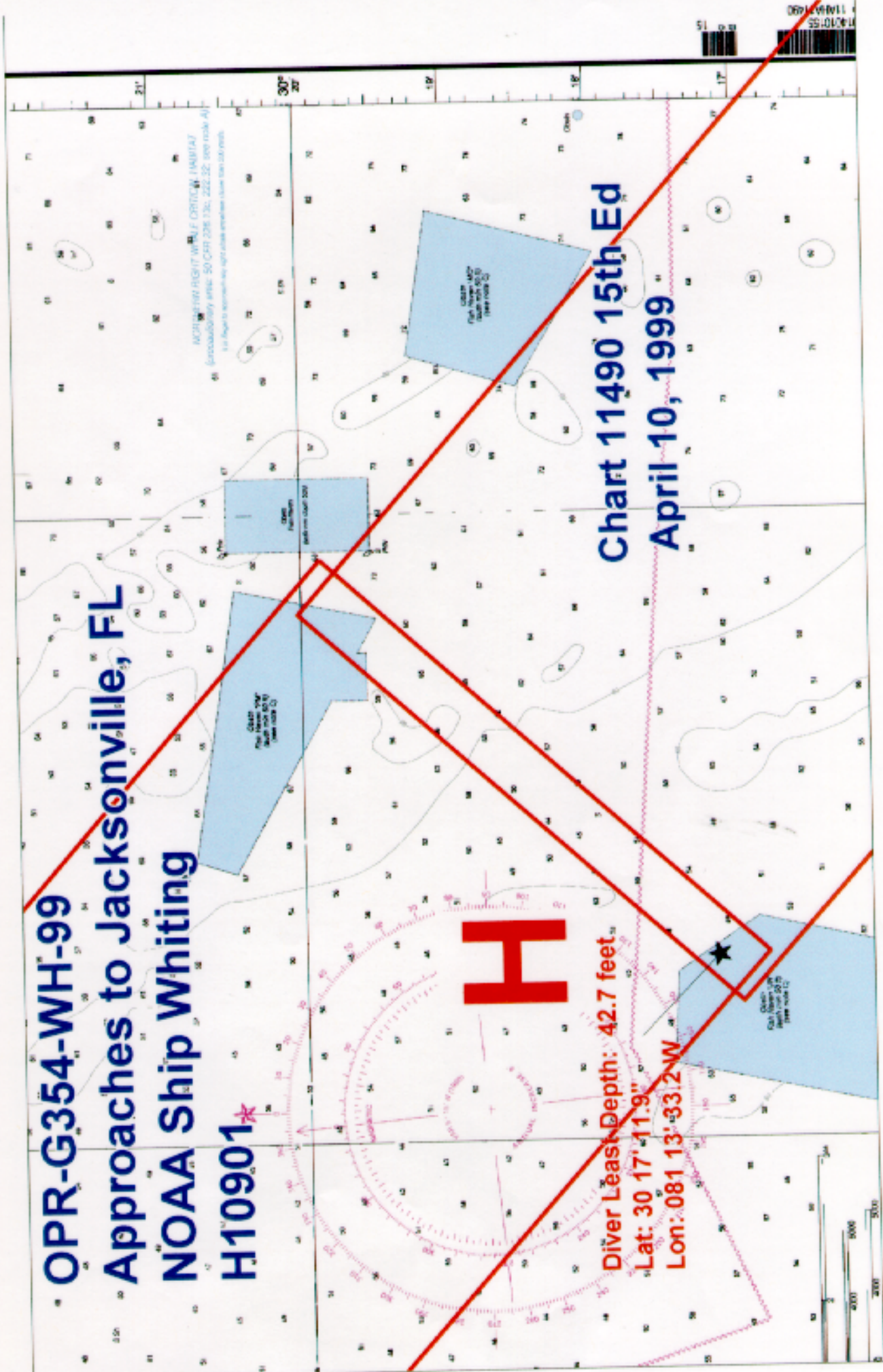
NOAA'S RIGHT-WAY CRITICAL HABITAT  
(probability area 50 CFR 208.13c, 222.52, 200 rules A)  
In Right-way areas, right-of-way structures shall not be constructed.

H10901\*

**H**

Diver Least Depth: 42.7 feet  
Lat: 30 17' 11.9"  
Lon: 081 13' 33.2 W

**Chart 11490 15th Ed**  
**April 10, 1999**





UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
Silver Spring, Maryland 20910

**TIDE NOTE FOR HYDROGRAPHIC SURVEY**

**DATE:** November 3, 1999

**HYDROGRAPHIC BRANCH:** Atlantic  
**HYDROGRAPHIC PROJECT:** OPR-G354-WH-99  
**HYDROGRAPHIC SHEET:** H-10901

**LOCALITY:** Approaches to Jacksonville, FL- Atlantic Ocean

**TIME PERIOD:** June 6 - June 27, 1999

**TIDE STATION USED:** 872-0291 Jacksonville Beach, FL  
Lat. 30° 17.0'N Lon. 81° 23.2'W  
**PLANE OF REFERENCE (MEAN LOWER LOW WATER):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 1.619 meters

**REMARKS: RECOMMENDED ZONING**  
**Use zone(s) identified as:** ATL853, ATL854, ATL860, ATL861 & ATL862.

Refer to attachments for zoning information.

**Note :** Provided time series data are tabulated in metric units (Meters), relative to MLLW and on Greenwich Mean Time.

*Thomas V. Mero* 11/4/99  
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**CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION**





GEOGRAPHIC NAMES

H-10901

Name on Survey	A ON CHART NO. 11488, 11490		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 ATLAS		G RAND McNALLY ATLAS		H U.S. LIGHT LIST		K	
FLORIDA (title)	X		X															1
NORTH ATLANTIC OCEAN	X		X															2
ST JOHNS RIVER (title)	X		X															3
																		4
																		5
																		6
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*Dennis J. Remesburg*  
 JUN 20 2000

01/26/2001

HYDROGRAPHIC SURVEY STATISTICS  
REGISTRY NUMBER: H10901

NUMBER OF CONTROL STATIONS		2
NUMBER OF POSITIONS		22306
NUMBER OF SOUNDINGS		22306
	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	33.0	11/04/1999
VERIFICATION OF FIELD DATA	347.5	09/28/2000
QUALITY CONTROL CHECKS	0.0	
EVALUATION AND ANALYSIS	31.0	
FINAL INSPECTION	5.0	09/07/2000
COMPILATION	64.0	01/18/2001
TOTAL TIME	480.5	
ATLANTIC HYDROGRAPHIC BRANCH APPROVAL		09/28/2000

**LETTER TRANSMITTING DATA**

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY (Check)

- ORDINARY MAIL                       AIR MAIL  
 REGISTERED MAIL                       EXPRESS  
 GBL (Give number) \_\_\_\_\_

DATE FORWARDED  
*01/29/01*

NUMBER OF PACKAGES  
2

**TO:**

[ NOAA, National Ocean Service  
Chief, Data Control Group  
N/CS3x1, Station 6813, SSMC3  
1315 East-West Highway  
Silver Spring, MD 20910 ]

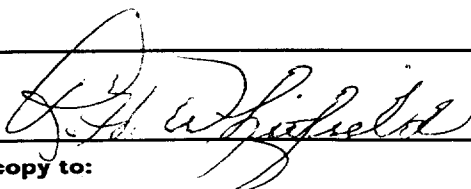
**NOTE:** A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

H10901  
Florida, North Atlantic Ocean, approaches to St Johns River

One box containing:  
1 original Descriptive Report for survey H10901

One tube containing:  
1 Original smooth sheet for H10901  
1 paper composite plot of survey H10901 for chart 11490  
1 Mylar H-Drawing of H10901 for chart 11490

FROM: (Signature)



**RECEIVED THE ABOVE**  
(Name, Division, Date)

Return receipted copy to:

[ Attn: Richard H. Whitfield  
Atlantice Hydrographic Branch, N/CS33  
439 West York St.  
Norfolk, Virginia 23510-1114 ]

**ATLANTIC HYDROGRAPHIC BRANCH  
EVALUATION REPORT FOR H10901 (1999)**

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

**D. AUTOMATED DATA ACQUISITION AND PROCESSING**

The following software was used to process data at the Atlantic Hydrographic Branch:

Hydrographic Processing System (HPS)  
MicroStation 95, version 5.05  
SiteWorks, version 2.01  
NADCON, version 2.10  
I/RAS B, version 5.01

The smooth sheet was plotted using a Hewlett Packard DesignJet 2500CP plotter.

**H. CONTROL STATIONS**

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD 83). The smooth sheet has been annotated with ticks showing the computed mean shift between the NAD 83 and the North American Datum of 1927 (NAD 27).

To place this survey on the NAD 27 datum, move the projection lines 0.872 seconds (26.85 meters or 2.68 mm at the scale of the survey) north in latitude and 0.715 seconds (19.10 meters or 1.91 mm at the scale of the survey) east in longitude.

**K. JUNCTIONS**

**H10885 (1999) to the southeast**

A standard junction was effected between the present survey and H10885 (1999). Present survey depths are in harmony with the charted hydrography where there are no junctional surveys.

**L. COMPARISON WITH PRIOR SURVEYS**

A comparison with prior surveys was not done during office processing. This is in accordance with section 4. of

the memorandum titled, *Changes to Hydrographic Survey Processing*, dated May 24, 1995. This also applies to surveys using 100% side scan sonar coverage with 100% multibeam coverage.

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

**N. COMPARISON WITH CHARTS 11009 (35<sup>th</sup> Edition, Aug. 7/99)  
11480 (36<sup>th</sup> Edition, Jul. 3/99)  
11488 (22<sup>nd</sup> Edition, May 15/99)  
11490 (16<sup>th</sup> Edition, Aug. 19/00)**

The charted hydrography originates with prior surveys and no further discussion is required. The following should be noted:

A charted dump site, in the vicinity of Latitude 30°21'00"N, Longitude 81°18'00"W, should be revised to reflect present survey depths.

**N.2.** One Danger to Navigation Report was submitted to Commander (oan), Seventh Coast Guard District, Brickell Plaza Building, 909 SE 1<sup>st</sup> Avenue, Miami, Florida for inclusion in the Local Notice to Mariners and to the Marine Chart Division, Silver Spring, Maryland. A copy of the report is appended to the Descriptive Report.

The item submitted is charted as a depth of 42 feet in Latitude 30°17'11.9"N, Longitude 81°13'33.2"W, on the latest edition of chart 11490. The depth of 42 feet was computed with predicted tides, and is also described as an obstruction in section M., page 11 of the Descriptive Report. During office processing approved tides were applied to the present survey. The obstruction is within the limits of charted Fish Haven "JW" (auth min 50 ft). It is recommended that the charted 42-ft depth be revised to a dangerous obstruction with a depth of 44-ft (44 Obstn) as shown on the present survey.

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

**O. ADEQUACY OF SURVEY**

This is an adequate hydrographic survey. No additional work is recommended.

**R. MISCELLANEOUS**

Chart compilation using the present survey data was done by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compiled data will be forwarded to Hydrographic Survey Division, Silver Spring, Maryland. The following NOS chart was used for compilation of the present survey:

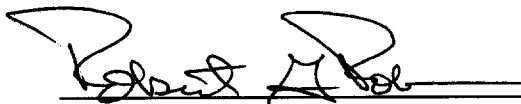
11490 (16<sup>th</sup> Edition, Aug. 19/00)

Marilyn Schlüter  
Marilyn L. Schlüter  
Cartographic Technician  
Verification of Field Data  
Evaluation and Analysis

APPROVAL SHEET  
H10901

Initial Approvals:

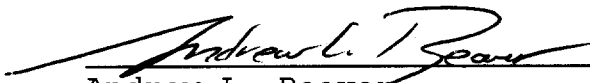
The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.



Date: 28 SEPTEMBER 2000

Robert G. Roberson  
Cartographic Team Leader  
Atlantic 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.



Date: 9/28/00

Andrew L. Beaver  
Lieutenant Commander, NOAA  
Chief, Atlantic Hydrographic Branch

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Final Approval:

Approved: 

Date: March 21, 2001

Samuel P. DeBow  
Captain, NOAA  
Chief, Hydrographic Surveys Division



MARINE CHART BRANCH  
**RECORD OF APPLICATION TO CHARTS**

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H10901

**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
11490	12/4/00	<i>[Signature]</i>	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
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