

H11220

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey **Basic Hydrographic**

Registry No. **H11220**

LOCALITY

State/Territory Florida

General Locality St. Johns River

Sub-locality Smith Point to Picolata

2004

CHIEF OF PARTY
David B. Elliott -Team Leader

LIBRARY & ARCHIVES

DATE

NOAA FORM 77-28 U.S. DEPARTMENT OF COMMERCE
(11-72) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HYDROGRAPHIC TITLE SHEET

REGISTRY NUMBER:

H11220

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: N/A

State/Territory: **Florida**

General Locality: **St. Johns River**

Sub-Locality: **Smith Point to Picolata**

Scale: **1:10,000** Date of Survey: May 5, 2004 to June 24, 2004

Instructions Dated: **05 May 2003** Project Number: **OPR-G443-NRB**

Vessel: **NOAA Launch 1210**

Chief of Party: **David B. Elliott - Team Leader**

Surveyed by: **David Elliott, Robert Ramsey & Laurie Brennan (NRT2)**

Soundings by: **Innerspace 448**

Graphic record scaled by: **DE, RR, LB**

Graphic record checked by: **DE, RR, LB**

Protracted by: **N/A** Automated Plot: **HP-750C (*field*)**

Verification by: **Atlantic Hydrographic Branch *Personnel***

Soundings in: **Meters *Feet* at MLLW**

Remarks: ***Bold, red, italic notes in the Descriptive Report were made during office processing.***

1) All Times are UTC.

2) This is a basic Hydrographic Survey under the Navigable Area Concept.

3) Projection is UTM Zone 17.

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DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SURVEY H-11220

Scale of Survey: 1:10,000

Year of Survey: 2003

Navigation Response Team 2 - Launch 1210

David B. Elliott- Team Leader

A. AREA SURVEYED

This hydrographic survey was conducted in accordance with Port Letter Instructions for project OPR-G443-NRB, Brunswick Georgia to Jacksonville, Florida. The instructions are dated May 5, 2003.

The purpose of this project is to collect new hydrography in support of the NOAA led Coastal Storms Initiative and to update National Ocean Service (NOS) charts on the St. Johns River in the vicinity of Jacksonville, FL. Results from the investigations will also serve as a chart evaluation for NOS Electronic Nautical Charts (ENC). The hydrographic data from this project will help ensure navigational safety through updated critical nautical charts and provide new information for emergency response organizations to use in the event of a marine casualty or coastal storm.

Survey Limits for Sheet "G" - H-11220 are as follows:

30° 00' 36" N
081° 37' 58" W
29° 54' 02" N
081° 33' 14" W

Survey Dates: May 5, 2004 (DN: 126) to June 24, 2004 (DN: 176)

Survey limits are displayed graphically in the chartlet on the following page .

B. DATA ACQUISITION AND PROCESSING *See also the Evaluation Report*

B.1. EQUIPMENT

Data were acquired by Navigation Response Team 2 and survey Launch 1210. The vessel was configured as described in the Data Acquisition and Processing Report (DAPR)*for this project. Major data acquisition systems are summarized below. * *Filed at the Atlantic Hydrographic Branch (AHB).*

An Innerspace model 455 depth sounder, S/Ns 189 was used to collect all echo soundings on this survey. A standard lead line calibrated in meters, S/N 1210, was used during this survey for comparison with the echo sounder. No problems were encountered with any of the sounding equipment.

A Klein 3110 side scan sonar recorder (S/N 315) with a model 3210 towfish (S/N 414), was used throughout this survey. The side scan sonar equipment was used to investigate AWOIS items.

A Trimble DGPS Beacon Receiver (S/N 0220261525) was used as the primary navigation station on launch 1210.

A Trimble Pathfinder ProXRS (S/N 0224010201) and antenna (S/N 0220170250) were used for all ENC high accuracy positioning and establishment of calibration points.

The instrument used for determining corrections for the speed of sound through the water column was a Seabird-Seacat Velocity Profiler, model 19-03, S/N 198671-1477.

NOAA launch 1210, a 27-foot SeaArk with a draft of 0.5 meters, was used to collect all survey data. There were no unusual vessel configurations or problems encountered with the vessel.

B.2. QUALITY CONTROL

The integrity of the survey data for H-11220 has been insured by following the Field Procedures Manual and the NOS Hydrographic Surveys Specifications and Deliverables Manual, June 2003.

The lead line for launch 1210 was calibrated using a steel tape on March 25, 2003(DN:084). No corrections were necessary. A static draft of 0.5 meters was applied to the sounding plots by the Carris program. The draft was measured by subtracting the difference from a punch mark on the side of launch 1210, 0.6 meter above the transducer, to the water surface.

Settlement and squat measurements for launch 1210 were taken on March 25, 2003(DN:084) These measurements were conducted in Jacksonville, FL on the St. Johns River using the level method.

Settlement and squat correctors were applied to the sounding plots using the Carris program.

Differential GPS (DGPS) was used for all hydrographic data acquired on this survey. DGPS performance checks were conducted in accordance with FPM 3.4.4 by comparing the DGPS position of the vessel to a high accuracy (1st order) calibration point.

Side Scan Sonar Quality Control

Daily confidence checks were conducted by observing side scan imagery in the vicinity of known contacts, such as buoys or sand waves. Side scan data were considered satisfactory if these contacts could be distinguished throughout the entire range of the side scan trace. The confidence checks were performed daily at 100kHz.

A coverage of 200% was obtained wherever possible in the required survey areas and AWOIS items where water depth and/or hazards permitted. Side scan sonar coverage was conducted to the 12-foot depth curve and single beam reduced line spacing was performed in other areas where warranted. The towfish was deployed off the starboard quarter of the vessel, which proved very stable. Distorted images caused by strong tidal currents were seen periodically. All contacts and shadows were scaled and entered into Carris HIPS/SIPS to determine the height off the bottom. The significant contacts were then compared by position, as well as common depth and relationship to channels to determine if further investigations were needed. All areas surveyed were track line/swath line plotted to insure complete coverage.

The system frequencies used were 100kHz and 500kHz. The recorder was set on one of either 50/75/100-meter range scales. There were no water depths greater than 35 meters.

When operating in shoaler waters (e.g. less than 30 meters deep), a short tow was required for the Klein system. When cable-out was approximately 7 meters or less, minor degradation of the side scan imagery and Innerspace echosounder traces were noted due to cross-talk between the two systems.

Crossline and mainscheme sounding data were compared using MAPINFO 5.1, with no significant discrepancies observed.

Junctions *See also the Evaluation Report.*

Sounding Junctions were compared to H-11219, 2004 north *and H-11221 to the south* of H-11220. The soundings compared favorably within 1 to 2 feet. *Concur.*

B.3. CORRECTIONS TO ECHO SOUNDING

A table detailing all sound velocity casts is contained in Separates III*- Sound Velocity Profile Data. Sound velocity data has been submitted with the digital data package. Cast data is organized on the digital media as follows: vessel / day of cast / cast data.

There are no deviations to be discussed in this section.

C. VERTICAL AND HORIZONTAL CONTROL *See also the Evaluation Report.*

The instrument used for determining corrections for the speed of sound through the water column was a Seabird-Seacat Velocity Profiler. The manufacturer calibrated this unit on December 19, 2003. Data quality assurance tests were performed after each cast. Program VELOCWIN was used for computing the correctors. Corrections were applied to the sounding plot using the Carris HIPS.

Field tide reduction of soundings is based on unverified actual water levels from the NOAA Co-Ops site. The values are from Main Street Bridge station 872-0226 and are in six minute intervals. Values and correctors were applied at the perspective locations of Hydrography from the Zone files provided by CO-OPS/RDD. *Approved tides and zones were applied during office processing.*

All elevations and soundings on survey H-11220 are based on MLLW unless otherwise specified.

A Request for Approved Tides letter was sent to N/OPS1 on June 29, 2004 (Appendix IV).*

Horizontal Control

The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83), projected using UTM zone 17. The control reference station used for this survey was the USCG DGPS Station at Savannah, GA (Station ID #818), located at 32°08.3156' N, 081°41.7798' W.

Horizontal dilution of precision (HDOP) was monitored on Hypack daily on all survey platforms. Neither value exceeded 4.00, and adequate satellite coverage was maintained throughout the survey period. All positioning equipment was operated in a manner consistent with the manufacturer's requirements and as described in the DAPR**. There were no equipment malfunctions which affected the positional quality of the data.

* *Filed with the original digital data.*

** *Filed at AHB*

D. RESULTS AND RECOMMENDATIONS *See also the Evaluation Report.*

There are two charts affected by this survey:

11492, 19th edition, Nov. 24, 2001 1:40,000
11488, 24th edition, May. 26, 2001 1:80,000

General Agreement with Charted soundings

In general survey soundings compared with the charted soundings within two to three feet. The smooth tides may resolve some of these soundings. All charted soundings should be superseded by this survey.

Concur.

Note: Due to the nature of this survey for the Coastal Storms Initiative (CSI) and primary need for contemporary bathymetry, extensive shoreline investigations were not conducted. However visual identifications conducted by NRT2 found regions alongshore in the form of Dols, piles and piers to be adequately charted. Unless otherwise noted in the sections below all features along shore visible or submerged should remain as charted. *Concur.*

The following is a list of notable sounding discrepancies on the chart:

- 1.) The region of Colee Cove at 29° 56' 16" N, 081° 34' 34" W, reflects soundings three to four feet shoaler. *Concur.*

The following is a list of items that were investigated or disproved by 200% side scan sonar:

- 1.) The fish weir at 29° 57' 20.6" N, 081° 36' 22.1" W, does not exist. The hydrographer recommends remove this feature and symbol from the chart. *Concur. Delete Fish weir and note in parenthesis.*
- 2.) The submerged piles at 29° 56' 34.3"N, 081° 35' 05.0" W, exist as charted. This feature is believed to be AWOIS # 11778, which according to the AWOIS report had the wrong position. This item should be retained as charted. *Concur. See page8, section D., AWOIS Item Investigations.*

The side scan report, abstracts and contacts can be found in Seperates section II*.

** Filed with the original digital data.*

The following is a list of Charted sounding notations that were investigated by echo sounder.

- 1.) The 4 ½ foot report at 29° 58' 41" N, 081° 34' 07" W, is now reflecting depths of 7 to 8 feet deep. *Concur. Delete note "4½ft rep May 1983". Chart present survey depths.*

The following is a list of Charted items that were visually investigated.

- 1.) The 3 Dols at 30° 00' 29" N, 081° 37' 18"W, do not exist. The water was too shallow for side scan sonar. The investigation was conducted at low tide and the search result was negative. The hydrographer recommends removing these features and symbols from the chart. *Concur. Delete the three dols.*
- 2.) The pile at 29° 58' 08.0 "N, 081° 37' 03.5" W, exist as charted. *Concur, retain.*
- 3.) The ruins at 29° 55' 52.8" N, 081° 36' 36.3" W, exist as charted. *Concur, retain.*
- 4.) The piles at 29° 55' 31.2" N, 081° 37' 04.9" W, exist as charted. *Concur, retain.*
- 5.) The pile at 29° 54' 16.3" N, 081° 37' 02.6" W, exist as charted. *Concur, retain.*
- 6.) The platform PA at 29° 54' 10.5" N, 081° 37' 06.0"W, is a boat house attached to a pier connected to shore. Refer to the Satellite image in the Mr. Sid folder for the proper configuration of this feature. *Concur. Delete the Platform PA. Defer to MCD for correct charting of the area.*
- 7.) The mooring buoy at 29° 54' 08.5" N, 081° 37' 13.2 "W, does not exist and should be removed from the chart. *Concur. Delete mooring buoy.*
- 8.) The 5 charted platform ruins at 29° 54' 35.2" N, 081° 35' 34.8"W, exist as charted. *Concur, retain.*
- 9.) The visible Wreck PA at 29° 55' 29.4" N, 081° ~~57~~³⁵' 39.8"W, does not exist and should be removed from the chart. There is a submerged wreck in close proximity surrounded by 3 inch PVC piles at 29° 55' 30.74" N, 081° 35' 33.35"W, that should be charted. *Concur. Delete visible wreck, PA. Chart dangerous sunken wreck.*
- 10.) The submerged wreck and pipe at 29° 55' 35.9" N, 081° 35' 20.6 "W, exist as charted. *Concur, retain.*
- 11.) There is a submerged pile awash at 29° 56' 23.3" N, 081° 34' 29.8 "W, this feature was found visually. The currently charted ruins should be extended from shore to the charted offshore ruins at 29° ~~26~~⁵⁶' 23.1" N, 081° 34' 32.4"W. *Concur. Add ruins and connect the inshore ruins to the offshore ruins.*
- 12.) The marker at 29° 58' 23.3" N, 081° 34' 11.6 "W, should be charted as submerged. The area was too shallow for side scan and the feature is not visible. *Concur in part. Revise to Subm pile.*

AWOIS Item Investigations *See also the Evaluation Report.*

There was one AWOIS item within the survey limits. The initial reported position of this feature was searched and confirmed to be in error. The actual feature was identified and located due south approximately 400 meters at 29° 56' 34.3"N, 081° 35' 05.0"W. The hydrographer recommends editing this position in the AWOIS database to the survey position above. The detailed documentation for this feature can be found in the PSS in Pydro.

Dangers to Navigation *See also the Evaluation Report.*

There were three DTONS within the confines of H-11220, the reference for these features can be found in the Appendices section I*. The geographic locations for these DTONS are all new positions to the chart. These items were submitted in advance to MCD.

** Appended to this report.*

D. 2. ADDITIONAL RESULTS

Aids to Navigation and Other Detached Positions

All Navigation Aids serve their intended purpose. Charted positions should be superseded by new survey positions. *Concur. There are three fixed aids to navigation located by the hydrographer.*

There are no floating aids within the confines of H-11220. *Concur.*

Ferry Routes

There are no Ferry routes within the confines of H-11220. *Concur.*

Submarine Cables and Pipelines

There are two submerged cable crossings and no overhead cable crossing areas within the confines of H-11220. They are charted adequately. *Concur.*

Bridges

There are two bridges within the confines of H-11220. The "Shands" bridge Hwy 16 crossing the St. Johns River should reflect double spans where two additional lanes have been added. A satellite image of this region should be provided for this change. Vertical and horizontal bridge clearances were checked by NRT2 and are adequately charted. ***Note: With the exception of the Trout Creek Bridge on Hwy 13 at 29° 56~~59~~' 06.7" N, 081° 33' 57.1" W. The vertical bridge clearance is now **18.5** feet at MHW, The vertical clearance is currently charted at 14 feet. This clearance was measured with a laser and steel tape at the request of the owner at Pacetti's Marina and Campground located at the bridge. The hydrographer recommends charting the vertical clearance at 18.0 feet.

MapInfo Shape files

The MapInfo table "New shapes H-11220", located in the survey data under Level 1\ plots\ shoreline, depicts shapes associated with DTON features.

E. APPROVAL SHEET

**OPR-G443-NRB
St. Johns River
Jacksonville, FL
Survey Registry No. H-11220**

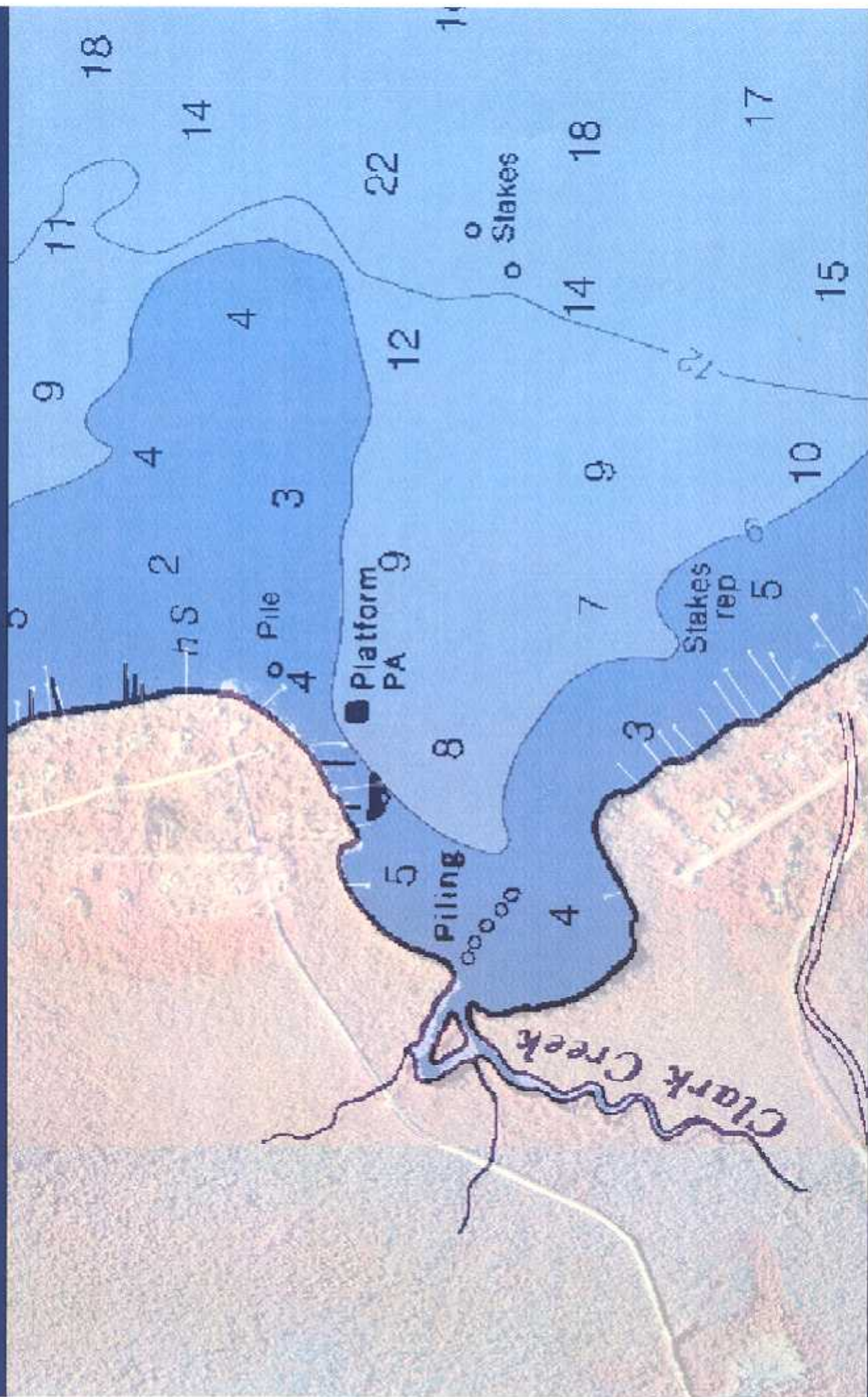
Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy. All field sheets, this Descriptive Report, and all accompanying records and data are approved.

This survey is adequate to supersede all prior surveys in common areas, and for application to the relevant NOS nautical charts.



Submitted:

**David B. Elliott - Team Leader
Navigation Response Team 2**



H-11220 DTON's

Registry Number: H-11220
State: Florida
Locality: St. Johns River
Sub-locality: Smith Point to Picolata
Project Number: OPR-G443-NRT2
Survey Dates: 05/27/2004 - 06/22/2004

The following report addresses items located during survey H-11220, 2004.

Charts Affected

Number	Version	Date	Scale
11492	19th Ed.	11/24/2001	1:40000
11488	24th Ed.	05/26/2001	1:80000
11480	38th Ed.	05/01/2003	1:449659
11451	31st Ed.	02/01/2003	1:495362
11006	31st Ed.	09/01/2003	1:875000
11009	36th Ed.	10/20/2001	1:1200000
411	49th Ed.	03/01/2003	1:2160000

Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
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1.1	Pile	0.05 m	029° 54' 52.438" N	81° 35' 41.476" W	---
1.2	Pile	-0.02 m	029° 54' 54.594" N	81° 37' 10.041" W	---
1.3	Obstruction	0.30 m	029° 59' 03.225" N	81° 35' 22.320" W	---

1 - Danger To Navigation

1.1) ruins**DANGER TO NAVIGATION****Survey Summary**

Survey Position: 029° 54' 52.438" N, 81° 35' 41.476" W
Least Depth: 0.05 m
Timestamp: 2004-148.16:32:56.000 (05/27/2004)
DP Dataset: H-11220_G / 1210dp_Non_Echosounder / 2004-148 / 05272004
Profile/Beam: 1/1
Charts Affected: 11492_2, 11488_1, 11480_1, 11451_17, 11006_1, 11009_1, 411_1

Remarks:

fowl to shore and 50 M left to right of East/West axis.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H-11220_G/1210dp_Non_Echosounder/2004-148/05272004	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart area as foul to shore. *Concur.*

Cartographically-Rounded Depth (Affected Charts):

0ft (11492_2, 11488_1, 11451_17)

0fm (11480_1, 11006_1, 11009_1, 411_1)

Feature Images



Figure 1.1.1



Figure 1.1.2



Figure 1.1.3

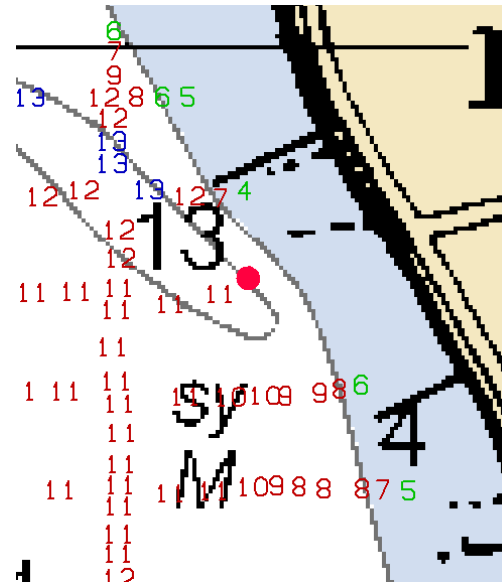


Figure 1.1.4

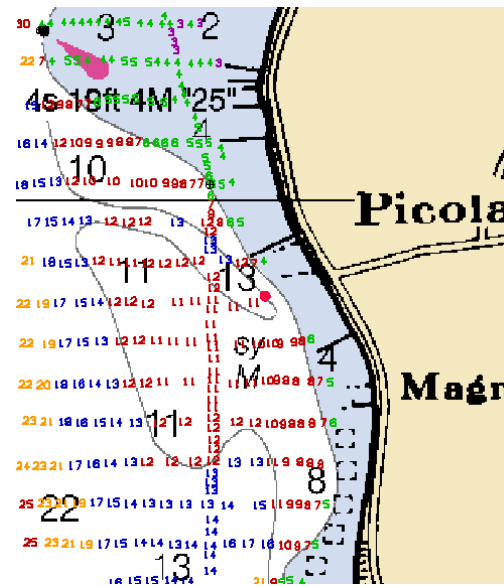


Figure 1.1.5

1.2) ruins**DANGER TO NAVIGATION****Survey Summary**

Survey Position: 029° 54' 54.594" N, 81° 37' 10.041" W
Least Depth: -0.02 m
Timestamp: 2004-148.17:05:39.000 (05/27/2004)
DP Dataset: H-11220_G / 1210dp_Non_Echosounder / 2004-148 / 05272004
Profile/Beam: 2/1
Charts Affected: 11492_2, 11488_1, 11480_1, 11451_17, 11006_1, 11009_1, 411_1

Remarks:

Offshore end of pier ruins. extend perpindicular to shore.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H-11220_G/1210dp_Non_Echosounder/2004-148/05272004	2/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart offshore end of ruins extending from shore, on an E/W axis, to position $29^{\circ}54'54.594''$, $-081^{\circ}37'10.041''$. *Concur.*

Cartographically-Rounded Depth (Affected Charts):

0ft (11492_2, 11488_1, 11451_17)

0fm (11480_1, 11006_1, 11009_1, 411_1)

Feature Images



Figure 1.2.1

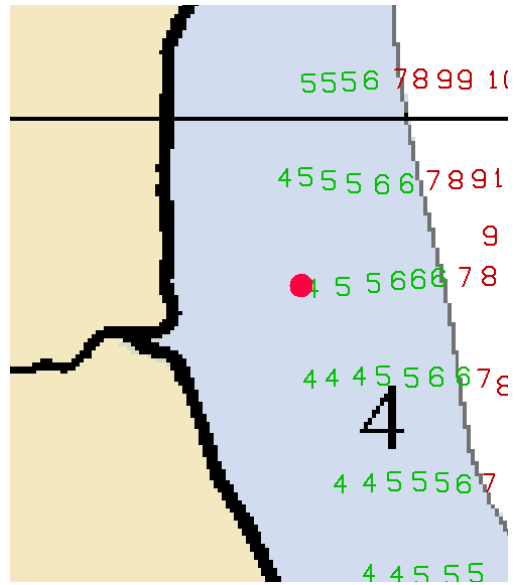


Figure 1.2.2

1.3) offshore ruins

DANGER TO NAVIGATION

Survey Summary

Survey Position: 029° 59' 03.225" N, 81° 35' 22.320" W
Least Depth: 0.30 m
Timestamp: 2004-174.13:53:05.000 (06/22/2004)
DP Dataset: H-11220_G / 1210dp_Non_Echosounder / 2004-174 / 06222004
Profile/Beam: 1/1
Charts Affected: 11492_2, 11488_1, 11480_1, 11451_17, 11006_1, 11009_1, 411_1

Remarks:

Visually identified offshore end of charted ruins. Ruins extend from currently charted ruins along same axis.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H-11220_G/1210dp_Non_Echosounder/2004-174/06222004	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Extend charted ruins to offshore point at 29°59'03.225" , -081°35'22.320". *Concur.*

Cartographically-Rounded Depth (Affected Charts):

1ft (11492_2, 11488_1, 11451_17)

0fm (11480_1, 11006_1, 11009_1, 411_1)

Feature Images

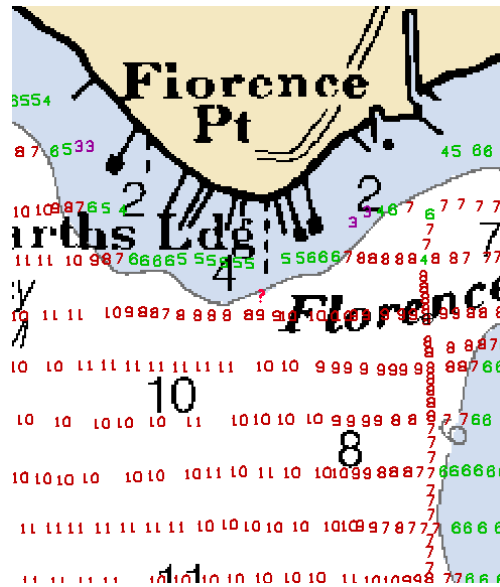


Figure 1.3.1



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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: April 28, 2005

HYDROGRAPHIC BRANCH: Atlantic

HYDROGRAPHIC PROJECT: OPR-G443-NRT2-2004

HYDROGRAPHIC SHEET: H11220

LOCALITY: Smith Point to Picolata, St. Johns River, FL

TIME PERIOD: May 5 - June 24, 2004

TIDE STATION USED: 872-0503 Red Bay Point, FL

Lat. 29° 58.7'N Lon. 81° 37.7'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.291 meters

REMARKS: RECOMMENDED ZONING

Use zone(s) identified as: SJR50, SJR51, SJR52, SJR52A & SJR53.

Refer to attachments for zoning information.

Note 1: Provided time series data are tabulated in metric units
(meters), relative to MLLW and on Greenwich Mean Time.

Thomas V. Mero 4/29/05

CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION



**ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR H11220 (2004)**

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.

B. DATA ACQUISITION AND PROCESSING

B.1 EQUIPMENT

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

Hydrographic Processing System
MicroStation J, version 07.01.04.16
I/RAS B, version 07.01.000.18
MapInfo, version 6.5
CARIS HIPS/SIPS 5.4
PYDRO, version 5.3.3rc5

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

Junctions

H11219 (2004) to the north
H11221 (2004) to the south

A standard junction was effected between the present survey and surveys H11219 (2004) and H11222 (2004).

C. VERTICAL AND HORIZONTAL CONTROL

Horizontal Control

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM Zone 17N. Office processing of this survey is based on these values.

D. RESULTS AND RECOMMENDATIONS

CHART COMPARISON 11492 (20th Ed., Apr/05)

The charted hydrography originates with prior surveys and

requires no further consideration. The hydrographer makes an adequate chart comparison in section D. of the Descriptive Report.

AWOIS Item Investigations

Automated Wreck and Obstruction Information System (AWOIS) item #11778 is a charted Submerged piles in Latitude 29°56'47.67"N, Longitude 81°35'04.71"W. The position in the AWOIS listing is in error. The charted position, Latitude 29°56'34.30"N, Longitude 81°35'05.00"W, was verified by the hydrographer. It is recommended that the AWOIS position in the data base be revised to the position verified by the present survey. The submerged piles are shown in the correct position on the latest edition of the chart. No change in charting is recommended.

Dangers to Navigation

Three Dangers to Navigation Reports were submitted by the hydrographer to the Marine Chart Division (MCD), Silver Spring, Maryland for inclusion in the Local Notice to Mariners. Copies of these reports are appended to the Descriptive Report.

The three Dangers to Navigation have currently been applied to the latest edition of the chart. No change in charting is recommended.

ADEQUACY OF SURVEY

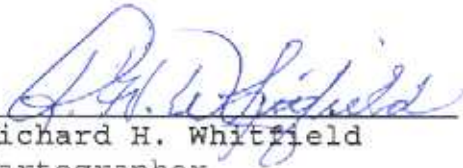
This is an adequate hydrographic survey. No additional work is recommended.

MISCELLANIOUS

Chart compilation was done by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland. The following NOS chart was used for compilation of the present survey: 11492 (20th Edition, Apr /05)

Corrected through NM Apr. 09/05


Corrected through LNM Mar. 29/05

A handwritten signature in blue ink, appearing to read "R. H. Whitfield", is written over a horizontal line.

Richard H. Whitfield
Cartographer
Verification of Field Data
Evaluation and Analysis

APPROVAL SHEET
H11220 (2004)


The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproof 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.



Norris A. Wike, Cartographer,
Atlantic Hydrographic Branch

Date: 1/10/06

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.

Approved: 

P. Tod Schattgen
Commander, NOAA
Chief, Atlantic Hydrographic Branch

Date: 3/09/06

