

**W00170, W00171, W00172, W00173**

NOAA FORM 76-35A

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

**DESCRIPTIVE REPORT**

*Type of Survey:* Outside Source Data (OSD-AHB-06)  
Multibeam and Side Scan Sonar

*Registry Number:* W00170, W00171, W00172, & W00173

**LOCALITY**

*State:* Georgia

*General Locality:* Kings Bay

*Sub-locality:* Approaches to the Saint Mary's River

**2006**

CHIEF OF PARTY

**Outside Source Data (NAVO)**

LIBRARY & ARCHIVES

DATE

*NAVO Survey Report for Hydrographic Surveys W00170, W00171, W00172, & W00173 of OSD-AHB-06 has been intentionally omitted as part of this document due to being classified by the United States Navy as not for public release.*

**ATLANTIC HYDROGRAPHIC BRANCH PREFACE NOTES FOR SURVEYS  
W00170, W00171, W00172, W00173 of OSD-AHB-06.**

Final H-Cell products for hydrographic surveys W00170, W00171, W00172, & W00173 were processed and finalized by AHB as a single product. This was done in order to consolidate the hydrography obtained by USNS LITTLEHALES T-AGS 52 from 29OCT2001 to 28JAN2002. The Evaluation Report addresses all references made concerning W00170, W00171, W00172, & W00173 and serves as a single document to detail all subsequent information not contained within the NAVO Survey Report. Additionally, Surveys W00170, W00171, W00172, & W00173 were consolidated into H-Cell files W00170-173\_CU.000, W00170-173\_SS.000, and W00170-173\_Bluenotes.000.

# W00170-173 Feature Report

**Registry Number:** W00170  
**State:** Georgia  
**Locality:** King's Bay  
**Sub-locality:**  
**Project Number:** NA  
**Survey Date:** 2001

## Charts Affected

Number	Version	Date	Scale
11503	41st Ed.	04/01/2005	1:25000
11489	36th Ed.	06/01/2005	1:40000
11502	30th Ed.	12/01/2005	1:80000
11480	39th Ed.	09/01/2005	1:449659
11451	32nd Ed.	03/01/2005	1:495362
11009	37th Ed.	07/01/2004	1:1200000
411	51st Ed.	12/01/2006	1:2160000

## Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	8-ft Obstruction	GP	2.40 m	30° 41' 50.712" N	081° 28' 00.408" W	---
1.2	11-ft Obstruction	GP	3.40 m	30° 42' 39.600" N	081° 28' 12.396" W	---

# **1 - Dangers to Navigation**

**1.1) GP No. - 1 from DTONs.txt****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 30° 41' 50.712" N, 081° 28' 00.408" W  
**Least Depth:** 2.40 m  
**Timestamp:** 1990-001.11:60:00.000 (01/01/1990)  
**GP Dataset:** DTONs.txt  
**GP No.:** 1  
**Charts Affected:** 11503\_1, 11489\_1, 11502\_1, 11480\_1, 11451\_17, 11009\_1, 411\_1

**Remarks:**

Depths are reduced to Mean Lower Low Water using observed water levels from Seacamp Dock(8679758)and St. Mary's Entrance gauges (8720011). Positions are referenced using DGPS-WADGPS. Horizontal Datum is WGS-84.

Feature is an 8-ft Obstruction as surveyed by the Naval Oceanographic Office in 2001. Data was provided to NOAA AHB as a survey scale plot with features.

**Hydrographer Recommendations**

Chart an 8 ft obstruction at the given location. The full density survey data has not been submitted nor reviewed by AHB. This DTON was observed in the drawing file provided by NAVO. AHB considers the submitted drawing as source data. Provided danger information is unverified.

**Cartographically-Rounded Depth (Affected Charts):**

8ft (11503\_1, 11489\_1, 11502\_1, 11451\_17)

1 ¼fm (11480\_1, 11009\_1, 411\_1)

**S-57 Data**

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** HORACC - 4.3 m  
 OBJNAM - 8-ft Obstruction  
 QUASOU - 6:least depth known  
 RECDAT - 20010101  
 TECSOU - 3:found by multi-beam  
 VALSOU - 2.4 m  
 VERACC - 0.3 m

VERDAT - 12:Mean lower low water

## **Office Notes**

Concur with clarification. Shown on chart 11503; 42nd Ed., Jan/2007. Retain as charted.

## 1.2) GP No. - 2 from DTONs.txt

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 30° 42' 39.600" N, 081° 28' 12.396" W  
**Least Depth:** 3.40 m  
**Timestamp:** 1990-001.11:60:00.000 (01/01/1990)  
**GP Dataset:** DTONs.txt  
**GP No.:** 2  
**Charts Affected:** 11503\_1, 11489\_1, 11502\_1, 11480\_1, 11451\_17, 11009\_1, 411\_1

#### Remarks:

Depths are reduced to Mean Lower Low Water using observed water levels from Seacamp Dock(8679758)and St. Mary's Entrance gauges (8720011). Positions are referenced using DGPS-WADGPS. Horizontal Datum is WGS-84.

Feature is an 11-ft Obstruction as surveyed by the Naval Oceanographic Office in 2001. Data was provided to NOAA AHB as a survey scale plot with features.

#### Hydrographer Recommendations

Chart an 11 ft obstruction at the given location. The full density survey data has not been submitted nor reviewed by AHB. This DTON was observed in the drawing file provided by NAVO. AHB considers the submitted drawing as source data. Provided danger information is unverified.

#### Cartographically-Rounded Depth (Affected Charts):

11ft (11503\_1, 11489\_1, 11502\_1, 11451\_17)

1 ¾fm (11480\_1, 11009\_1, 411\_1)

#### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** HORACC - 4.7 m  
OBJNAM - 11-ft Obstrn  
QUASOU - 6:least depth known  
RECDAT - 20010101  
SORDAT - 20010101  
SORIND - US,U2,surve,W00170  
TECSOU - 3:found by multi-beam

VALSOU - 3.4 m

VERACC - 0.3 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

## Office Notes

Concur with clarification. Shown on chart 11503; 42nd Ed., Jan/2007. Retain as charted.

## AHB PRE-COMPILATION PROCESS

REGISTRY No.	W00170,W00171,W00172,W00173
PROJECT No.	OSD-AHB-06
FIELD UNIT	OSD-NAVO
PRE-COMPILER	OWENS
LARGEST SCALE CHART	11503, 42 <sup>nd</sup> edition, Jan/07
CHART SCALE	1:25,000
SURVEY SCALE	1:20,000
DATE OF SURVEY	20020128
CONTENT REVIEW DATE	N/A

Components	File Names
<i>Meta&amp;Contour Product Surface</i>	W00170-173_20k_200mrad_30mres.hns
<i>Shifted Surface</i>	W00170-173_20k_200mrad_30mres_Shifted.hns
<i>Contour Layer</i>	W00170-173_20k_200mrad_30mres_Contours.hob
<i>Survey Scale Soundings</i>	W00170-173_SS_Soundings_rev1.hob
<i>Chart Scale Soundings</i>	W00170-173_CS_Soundings_rev1.hob
<i>Feature Layer</i>	W00170-173_Features.hob
<i>Meta-Objects Layer</i>	W00170-173_MetaObjects_RRV.hob
<i>Blue Notes</i>	W00170-173_BlueNotes.hob

### SPECIFICATIONS:

- I. COMBINED SURFACE: N/A
- II. PRODUCT SURFACE (SOUNDINGS): N/A  
 PRODUCT SURFACE (CONTOURS): W00170-173\_20k\_200mrad\_30mres\_Shifted.hns
  - a. Scale: 1:20,000
  - b. Radius: 200 m
  - c. Resolution: 30 m
- III. SHIFTED SURFACE:
  - a. Single Shift Value: -0.229m (feet)
- IV. CONTOUR LAYER:
  - a. Use a Depth List: W00170-173\_NOAA\_depth\_Curves\_list.txt
  - b. Output Options:
    - i. Create contour lines:
      1. Line Object: DEPCNT
      2. Value Attribute: VALDCO
- V. SOUNDING SELECTION:
  - a. Selection Criteria: From XYZ data set\
- VI. FEATURES:
  - a. Brought in from Survey  
 Total No. 3
  - b. Brought in from Chart  
 Chart: 11503  
 Total No. 4
- VII. META-OBJECTS:
  - a. M\_COVR attributes

Acronym	Value
INFORM	W00170-173, OSD-AHB-06, NAVO, Vessel: USNS LITTLEHALES T-AGS 52
SORDAT	20020128
CATCOV	1
SORIND	US,US,survy,W00170,W00171,W00172,W00173

b. M\_QUAL attributes

Acronym	Value
CATZOC	B
INFORM	W00170-173, OSD-AHB-06, NAVO, Vessel: USNS LITTLEHALES T-AGS 52
POSACC	10
SORDAT	20020128
SORIND	US,US,survy,W00170,W00171,W00172,W00173
SUREND	20020128
SURSTA	20011029

VIII. NOTES:

Affected Charts:  
 11503 1:25,000  
 11489 1:40,000 SC  
 11502 1:80,000

<b>Bluenotes:</b>	85 Bluenotes are included.
<b>Features:</b>	12 Features are included.
<b>CS_Soundings:</b>	455 CS_Soundings from survey are included / 16 CS_Soundings that were retained from chart 11503 are included.
<b>SS_Soundings:</b>	7607 SS Soundings are included.
<b>Meta-objects:</b>	9 Meta-objects are included.

# ATLANTIC HYDROGRAPHIC BRANCH EVALUATION REPORT

**Project OSD-AHB-06 / Combined Surveys W00170, W00171, W00172, W00173  
Outside Source Data: NAVO Vessel: USNS LITTLEHALES T-AGS 52  
Approaches to the Saint Mary's River**

This Evaluation Report has been written to supplement and/or clarify the original Survey Report, Outside Source Data Survey Acceptance Review (SAR), and Pre-Compile Processing Log.

*NOTE: The NAVO supplied survey report is classified and NOT FOR PUBLIC RELEASE –Therefore, the report is not included with this submission.*

## **A. AREA SURVEYED**

The Atlantic Hydrographic Branch (AHB) has completed a survey acceptance review and evaluation of Outside Source Data (OSD) Surveys W00170, W00171, W00172, & W00173 of OSD-AHB-06. Surveys W00170-173 were done by the USNS LITTLEHALES T-AGS 52 using Klein 5000 side scan sonar and Simrad 1002 multibeam echo sounder. The Hydrographic Survey Launches (HSLs) used the Simrad 3000 multibeam echo sounder and the Data Sonics side scan sonar. Four smooth sheets at a scale of 1:10,000 were created using the survey data from areas shoreward of the sea buoy.

## **B. DATA ACQUISITION AND PROCESSING**

### **B.1 DATA PROCESSING**

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

HSTP PYDRO version 7.3 r2239  
CARIS HIPS/SIPS version 6.1 SP1 HF 1-9  
CARIS Bathy Editor version 2.1 HF 1-4  
DKART INSPECTOR, version 5.0 Build 732 SP1  
CARIS HOM version 3.3  
CARIS S57 Composer version 1.0

### **B.2. QUALITY CONTROL**

H-Cells W00170-173\_CS.000, W00170-173\_SS.000, and W00170-173\_Bluenotes.000 were created in CARIS Bathy Editor.

#### **B.2.1. H-Cell**

AHB extracted XYZ data from the four NAVO available smooth sheets provided. The data was imported into Caris then used to create stand alone HOB files for both selected sounding (SS) depths and survey features. Additionally, four Caris grids were

created and combined to create a 10 meter resolution combined surface. A product surface with a resolution of thirty meters was generated from the 10 meter combined surface in order to create the meta-objects and contours. The selected sounding set is approximately 10 times the number of charted depths at the largest scale chart available scale of 1:25,000. The chart scale selected soundings are a subset of the survey scale selected soundings and sounding spacing is representative the appropriate largest scale in the area. The surface model was referenced when selecting the chart scale soundings, to ensure that the selected soundings portrayed the bathymetry within the common area.

The pre-compilation products or components (Stand Alone HOB files (SAHOB)) are detailed in the Pre-Compile Process Log attached at the end of this document. The SAHOB files included sounding selections (SOUNDG), Rocks (UWTROC), Obstructions (OBSTRN), Depth Area (DEPARE), Meta objects (M\_COVR, M\_QUAL), zero foot depth contours (DEPCNT), and cartographic Blue Notes. The individual SAHOB files were inserted into one BASE Manager feature layer and exported to S57 format in order to create the H-Cell deliverable.

The completed H-Cell was exported as an H-Cell File (ENC.000) in S-57 format with all values in metric units. The metric equivalent ENC.000 file was then converted to NOAA chart units (ENC\_CU.000) with all values measured in feet following NOAA sounding rounding rules.

Chart compilation was performed by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland.

The W00170-173 CARIS H-Cell final deliverables include the following products:

US400170-00173_CS.000	1:25,000 Scale	W00170-173 H-Cell with Chart Scale Selected Soundings
US400170-00173_SS.000	1:20,000 Scale	W00170-173 Selected Soundings (Survey Scale)
US400170-0173_Bluenotes.000	1:25,000 Scale	W00170-173 Cartographic Notes & Compilation Scales

**B.2.2. Junctions**

No contemporary surveys exist for junctioning.

**C. VERTICAL AND HORIZONTAL CONTROL**

Adequate mention of both vertical and horizontal control were made in the NAVO report “Quality Review Summary for Kings Bay, Georgia” Therefore, no additional processing was required by AHB personnel. Sounding datum is Mean Lower Low Water (MLLW). Vertical datum is Mean High Water (MHW).

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 17. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements.

**D. RESULTS AND RECOMMENDATIONS**

**D.1 CHART COMPARISON**

11503, edition 42, 20070101 Scale 1:25,000

**ENC Comparison**

US4GA11M.000 ENC apparently Digitized from smaller scale chart 11502 1:80,000, therefore not useful for comparison.

**D.1.1 Hydrography**

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in Appendix 1 of the Descriptive Report. The following exceptions are noted:

1. Delete currently charted 16 ft dangerous obstruction and text "Obstn" on chart 11503, 42nd Edition, Jan/07 in approximate latitude 30°42'29.550" N, longitude 081°27'52.840" W. Chart dangerous obstruction, least depth known 10 feet and text "Obstn" at latitude 30°42'28.396" N, longitude 081°27'52.929" W.. Feature is a shoaler least depth of the currently charted 16 ft dangerous obstruction.

During H-Cell processing the following items were addressed and exist within

<b>US400170-00173_CS.000</b>		
<b>Quantity</b>	<b>Feature</b>	<b>Source</b>
455	SOUNDG	New from survey
16	SOUNDG	Retained from charted
2	UWTROC	Retained as charted
1	OBSTRN	Delete from chart
3	OBSTRN	New from survey
4	OBSTRN	Retained as charted
5	Zero foot DEPCNT	New from survey

<b>US400170-00173_SS.000</b>		
<b>Quantity</b>	<b>Feature</b>	<b>Source</b>
7607	SOUNDG	New from survey

<b>US400170-0173_Bluenotes.000</b>		
<b>Quantity</b>	<b>Feature</b>	<b>Source</b>
85	Cartographic Bluenotes	Survey & Chart

## **D.2. ADDITIONAL RESULTS**

### **D.2.1. Aids to Navigation**

No aids were positioned by the field.

## **D.3. MISCELLANEOUS**

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland. See Section D.1. of this report for a list of the Raster Charts and Electronic Navigation Charts (ENC) used for compiling the present survey:

## **D.4. ADEQUACY OF SURVEY**

The present OSD survey is adequate to supersede the charted bathymetry within the common area. **It is important to note that Combined Surveys W00170, W00171, W00172, W00173 were classified with an S-57 CATZOC attribute of “Category of zone of confidence B” - Full seafloor coverage not achieved; uncharted features, hazardous to surface navigation are not expected but may exist. Therefore, all wreck and obstruction features not directly addressed in the above W00170-173 Feature Report or this Evaluation report should be retained as charted.**

**APPROVAL SHEET**  
**W00170, W00171, W00172, W00173 (Combined)**

**Initial Approvals:**

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, representation of critical depths, cartographic symbolization, and verification or disproval of charted data. All revisions and additions made to the H-Cell files during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with National Ocean Service and Office of Coast Survey requirements except where noted in the Descriptive Report and the Evaluation Report.

All final products have undergone a comprehensive reviews per the Hydrographic surveys Division Office Processing Manual and are verified to be accurate and complete except where noted.

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**Edward A. Owens**  
Physical scientist  
Atlantic Hydrographic Branch

I have reviewed the H-Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet National Ocean Service requirements and standards for products in support of nautical charting except where noted.

Approved: \_\_\_\_\_

**Shepard Smith**  
Lieutenant Commander, NOAA  
Chief, Atlantic Hydrographic Branch