

H11304

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey: **Hydrographic**

Field No.: Sheet A

Registry Number: **H11304**

LOCALITY

State: Alabama

General Locality: Mobile Bay

Sub-locality: Southwest Approach to Mobile
Bay-North of Dauphin Island

2006-2007

CHIEF OF PARTY

Mark McMann, NRT-1

LIBRARY & ARCHIVES

DATE:

HYDROGRAPHIC TITLE SHEET

H11304

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

State: **Alabama**

General Locality: **Mobile Bay**

Sub-Locality: **Southwest Approach to Mobile Bay – North of Dauphin Island**

Scale: **1:10,000** Date of Survey: **08/30/06 to 10/09/07**

Instructions Dated: **06/09/04** Project Number: **OPR-J373 –NRT1-04**

Vessel: **NOAA S1211**

Chiefs of Party: **Mark McMann, NOAA**

Surveyed by: **MJM, EAL, IW, LTP**

Soundings by: **VB echo sounder.**

Graphic record scaled by: **N/A**

Graphic record checked by: **N/A**

Protracted by: **N/A** Automated Plot: **N/A**

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

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

Red, Bold, Italic notes in the Descriptive Report were made during Office Processing.

Remarks:

- 1) All Times are in UTC.***
- 2) This is a Navigable Area Hydrographic Survey 200% Side Scan Sonar coverage.***
- 3) Projection is UTM Zone 16.***

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DESCRIPTIVE REPORT

to accompany
Basic Hydrographic Survey H11304
OPR-J373-NRT1-04
Year of Survey: 2006-2007
Navigation Response Team 1
NOAA Launch S1211
Mark McMann - Team Leader

A. AREA SURVEYED

This Basic Hydrographic Survey was conducted in accordance with the Project Letter Instructions* for project OPR-J373-NRT1-04, Mobile Bay, Alabama. The instructions are dated June 9, 2004. *Concur.*

Mobile Bay is a major port in the Gulf of Mexico and listed as the 17th largest port in the United States, by cargo value, as identified in the 1999 NSD plan. It is also listed as a priority port for chart evaluation by the NOS' Marine Chart Division. Constituents have recently requested, through the NSD's Navigation Manager, surveys of the approaches to Mobile Bay and the GIWW in the area. In addition MCD has identified Mobile Bay as a priority in 2004 for the Coastal Shoreline Change Analysis Program.

The area surveyed by NRT1, consisted of approximately 3.0 square nautical miles (SNM) of Mobile Bay in the entrance to Mobile Bay. Both singlebeam echosounder and side scan sonar were acquired within the survey limits, wherever possible. Due to shallow water depths outside the GIWW, single beam echo sounder lines were run perpendicular to the channel to meet the survey limits. *Concur.*

Survey Limits for Sheet A, H11304 are as follows:

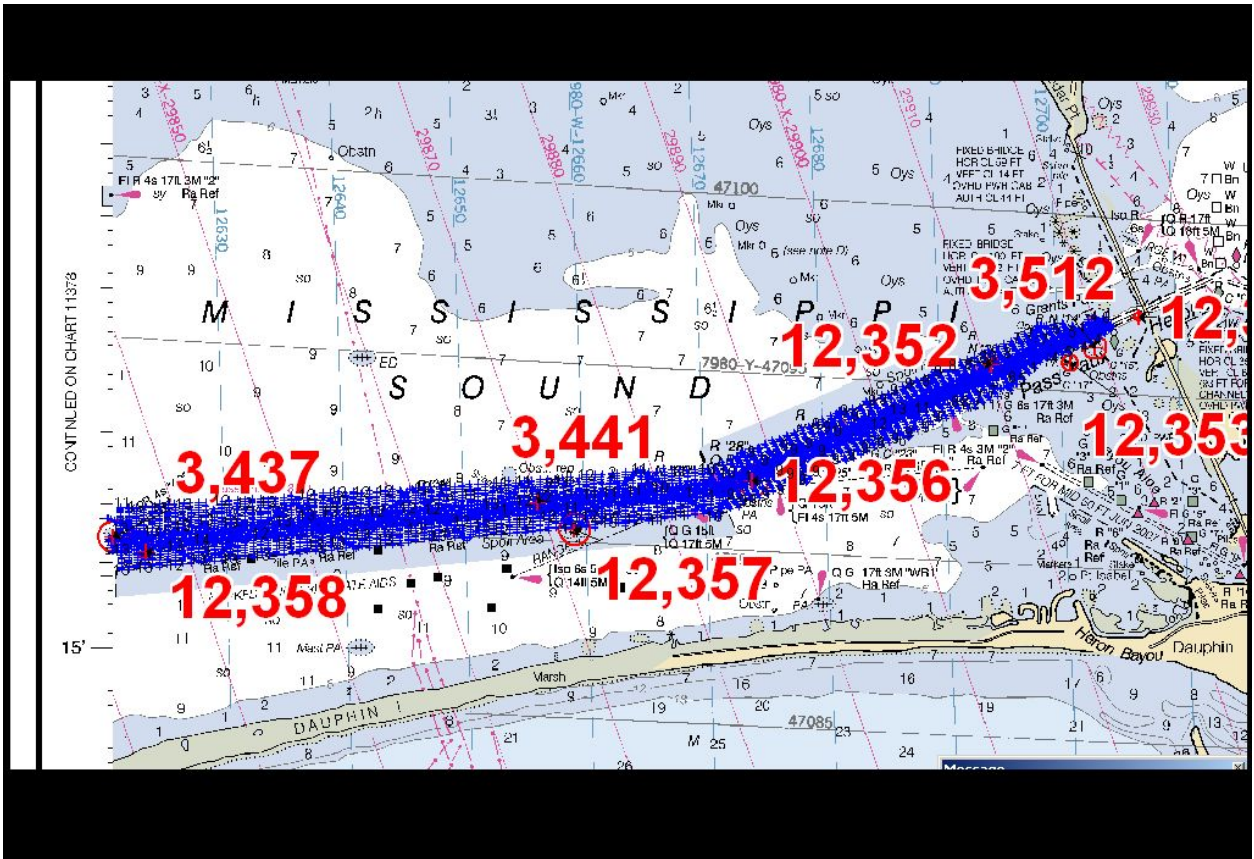
30° 17'20" N 88°07'57" W
30°15'31" N 88°16'03" W

Survey Dates: August 30, 2006 (DN: 242) to October 9,2007 (DN: 282).

Staffing issues have contributed to the time required to complete this survey.

Survey limits are displayed graphically:

**Filed with original field records.*



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

B.1. EQUIPMENT

Data were acquired by Navigation Response Team 1 using survey Launch 1211. The vessel was configured as described in the Data Acquisition and Processing Report (DAPR) *. Major data acquisition systems are summarized below.

NOAA Survey Launch 1211 was used to acquire position, sounding, imagery, and sound velocity data. Positions were acquired with a Trimble DSM212L Differential GPS (DGPS) beacon receiver. Soundings were acquired with an ODOM CVX2 single-beam echosounder (SBES) system. Imagery was acquired with a stern-towed KLEIN 3000 side scan sonar (SSS) system. Water column sound velocity data was acquired with a SeaBird Seacat 19 and an ODOM Digibar Pro DB1200 sound velocity profiler. *Concur.*

B.2. QUALITY CONTROL

The integrity of the survey data for H11304 was insured by following the Field Procedures Manual v2.1*, dated May, 2006, and the NOS Hydrographic Surveys Specifications and Deliverables Manual*, dated June, 2006.

Differential GPS (DGPS) was used for all hydrographic data acquired on this survey.

Side Scan Sonar

The side scan sonar system frequencies used were 100kHz and 500kHz. The recorder was set to 50 meter range. There were no water depths greater than 10 meters in areas where side scan data was collected.

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 both frequencies. Coverage of 200% was obtained wherever possible in the required survey areas and where water depth and/or hazards permitted. Side scan sonar coverage was conducted to the 12-foot depth curve where possible.

All side scan contacts were selected during processing in CARIS. Only contacts that could be positively identified while underway (ATONS, piles, platforms, other visible features) were

**Filed with original field records.*

selected in Sonarpro to facilitate their identification while processing. Any contacts, which were determined to be significant, were developed using SBES. *Concur.*

Crosslines

Crosslines were collected in a zig-zag pattern over the length of the project area. A total of 9.6 linear nautical miles (LNM) of crosslines were acquired by the field party. This is approximately 9.7 percent of mainscheme acquisition (98.6 LNM). A visual inspection of crossline data and main scheme data showed good comparison. *Concur.*

Junctions

No junctioning surveys were provided for comparison with this project. *Concur with clarification, H11304 junctions with H11305 of the same project to the east. Junction analysis will be performed during office processing of H11305.*

B.3. CORRECTIONS TO ECHO SOUNDING

Echosounder data were corrected for sound velocity using the methods defined in the DAPR*. A list of sound velocity profiles (SVP) can be found in the Daily Acquisition Log, located in the Separates* directory. SVPs have also been added to the Pydro PSS* for this project.

C. VERTICAL AND HORIZONTAL CONTROL

C.1. VERTICAL CONTROL

All soundings were reduced to Mean Lower Low Water (MLLW) with preliminary observed water levels and preliminary zoning.

The operating water level station at Dauphin Island (873-5180) provided water level reducers for this project.

Verified water levels from the Tides & Currents website (<http://tidesandcurrents.noaa.gov/olddata/>) were downloaded and applied to all soundings for this sheet. Water level corrections were applied to the soundings using CARIS HIPS and SIPS v6.1.

**Filed with original field records.*

Zoning was provided on the project CD.

A Request for Approved Water Levels letter was sent to N/OPS1 on Dec.. 17, 2007 and is included in Appendix IV. Approved Water Levels were received by the NRT and the approved water levels were reapplied in CARIS. *Concur.*

C.2. HORIZONTAL CONTROL

The horizontal datum used for this survey is the North American Datum (NAD83), projected using UTM zone 16. The control reference station used for this survey was the USCG DGPS Beacon in the auto-select mode.

Horizontal dilution of precision (HDOP) was monitored daily on Hypack. At no point did HDOP exceed 4.00, and adequate satellite coverage was maintained throughout the survey period.

All positioning equipment was operated in a manner consistent with the manufacturer requirements and as described in the DAPR*. There were no equipment malfunctions which affected the positional quality of the data. *Concur.*

**Filed with original field records.*

D. RESULTS AND RECOMMENDATIONS

D.1. CHART COMPARISON

There are five charts and three ENC's affected by this survey:

Chart	Edition	Print Date	Scale
11360	41st	03/2005	1:456394
11378	34 th	02/2006	1:40,000
11377	6 th	01/2007	1:40,000
11374	33rd	10/2005	1:40,000
11373	45th	02/2006	1:80,000
1115A	41st	03/2005	1:456394
11006	32nd	08/2005	1:875000

411	51st	12/2006	1:2160000
11376	52nd	06/2007	1:80,000

ENC Cell	Last Updated	Corresponding Chart	Version
US4AL11M	08/06/2007	11376	1
US5M21M	09/05/2007	11374	1
US5MS22M	1/26/2004	11375	1

General Agreement with Charted soundings

Comparison with the latest chart revealed good agreement with charted soundings. Current survey depths are 1 to 2 feet deeper than charted depths in most areas. In the area west of approx. 88.15W Lon, current survey soundings are generally 2-4 feet deeper than charted depths.

A charted "Obstruction PA" at 30.29N Lat. 88.14W Lon. was not assigned as an AWOIS item and was not investigated due to shallow water depths. The hydrographer recommends retaining the obstruction on the chart. *Concur.*

AWOIS Item Investigations

There were a total of 8 AWOIS items assigned to NRT-1 in Sheet € A. The radius of these items were covered using 200% SSS, where possible. *Concur with clarification. H11304 side scan sonar quality in the vicinity of the AWOIS investigations was insufficient for feature disproval. All AWOIS items are to be retained as charted.*

Results of all AWOIS investigations are contained in Appendix II. *Concur*

Dangers to Navigation

One DTON was identified in this survey. It was submitted to MCD on Oct.3, 2007. The DTON report is included in Section I of the Appendices. *Concur*

Shoreline

No shoreline features were investigated by the field party. *Concur*

D. 2. ADDITIONAL RESULTS

Aids to Navigation and Other Detached Positions

All Aids to Navigation in the survey area were found to be on station and serving their intended purpose. The field party has no recommendations on these Aids to Navigation.

An uncharted private maintained buoy was located and a detached position was taken. The position is in the features report for H11304. The hydrographer recommends charting the buoy. *Concur*

Ferry Routes

There are no ferry routes in the survey area. *Concur*

Submarine Cables and Pipelines

There were several charted submarine pipelines within the survey area. The field party did not attempt to identify or position any submerged cables or pipelines. *Concur*

Bridges and Overhead Cables

There were no bridges or overhead cables in the survey area. *Concur*

APPROVAL SHEET

OPR-J373-NRT1-04

Alabama

Mobile Bay

**Southwest Approach to Mobile Bay-
North of Dauphin Island**

Survey Registry No. H-11304

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:

Mark J. McMann- Team Leader

Navigation Response Team 1

APPENDIX I
DANGER TO NAVIGATION RECORDS

Dangers to Navigation

H11304 DTON Report

Registry Number: H11304
State: Alabama
Locality: Mobile Bay
Sub-locality: Southwest Approach to Mobile Bay- North of Dauphin Island
Project Number: OPR-J373-NRT1-04
Survey Date: 09/27/2007

Least depth on obstruction.

Charts Affected

Number	Version	Date	Scale
11374	33rd Ed.	10/01/2005	1:40000
11376	51st Ed.	02/01/2006	1:80000
1115A	41st Ed.	03/01/2005	1:456394
11360	41st Ed.	03/01/2005	1:456394
11006	32nd Ed.	08/01/2005	1:875000
411	51st Ed.	12/01/2006	1:2160000

Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Obstruction	3.14 m	30° 15' 46.930" N	088° 14' 49.401" W	---

3.1) Profile/Beam - 132/1 from h-11304 / 1211sb / 2007-270 / 007_1603**DANGER TO NAVIGATION****Survey Summary**

Survey Position: 30° 15' 46.9" N, 088° 14' 49.4" W
Least Depth: 3.21 m (= 10.54 ft = 1.756 fm = 1 fm 4.54 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2007-270.16:03:55.358 (09/27/2007)
Survey Line: h-11304 / 1211sb / 2007-270 / 007_1603
Profile/Beam: 132/1
Charts Affected: 11374_1, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

Least depth measurement of contact 0001. The feature was located with SSS and developed using SBES in star pattern. From the SB data the feature is believed to be an obstruction 14 meters long and 4 meters wide oriented E_W.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h-11304/1211sb/2007-270/007_1603	132/1	0.00	000.0	Primary
h-11304/1211sss500k/2007-270/sonar_data070927150600	0001	0.75	143.1	Secondary

Hydrographer Recommendations

Hydrographer recommends that least depth is charted as an obstruction at survey position and the depth per digital data.

Cartographically-Rounded Depth (Affected Charts):

10ft (11374_1, 11376_1)

1 ¾fm (1115A_1, 11360_1, 11006_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 1:depth known
 SORDAT - 20070927

SORIND - US,US,nsurf,H11304

TECSOU - 1,2:found by echo-sounder,found by side scan sonar

VALSOU - 3.212 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Geo object 2: Wreck (WRECKS)

Attributes: VALSOU - 3.212 m

Office Notes

Concur with clarification. Submitted as DTON by field unit. Shown on Chart 11374, 34th Ed., 20071001 and smaller scale charts as a dangerous obstruction, least depth 7 feet. Revise least depth of dangerous obstruction to 10 feet at the survey position.

APPENDIX II
FEATURE REPORT

Project: OPR-J373-NRT1-04 Sheet: H11304 Survey Features Report

Registry Number: H11304
State: Alabama
Locality: Mobile Bay
Sub-locality: Southwest Approach to Mobile Bay- North of Dauphin Island
Project Number: OPR-J373-NRT1-04
Survey Date: 09/27/2007

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11374	33rd	10/01/2005	1:40,000 (11374_1)	[L]NTM: ?
11377	5th	06/01/2003	1:40,000 (11377_1)	[L]NTM: ?
11378	34th	02/01/2006	1:40,000 (11378_6)	[L]NTM: ?
11376	52nd	06/01/2007	1:80,000 (11376_1)	USCG LNM: 03/18/2008 (05/13/2008) NGA NTM: 11/19/2005 (05/24/2008)
11373	45th	02/01/2006	1:80,000 (11373_1)	[L]NTM: ?
11360	41st	03/01/2005	1:456,394 (11360_1)	[L]NTM: ?
1115A	41st	03/01/2005	1:456,394 (1115A_1)	[L]NTM: ?
11006	32nd	08/01/2005	1:875,000 (11006_1)	[L]NTM: ?
411	51st	12/01/2006	1:2,160,000 (411_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	578	Sounding	[None]	30° 15' 43.9" N	088° 14' 46.9" W	---
2.1	RUDDIE O	AWOIS	[no data]	[no data]	[no data]	---
2.2	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
2.3	UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---
2.4	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
2.5	UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---
2.6	UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---

2.7	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
2.8	UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---

1 - New Features

1.1) Profile/Beam - 1/1 from h-11304 / nrt1_1211_dp_nonechosounder / 2007-270 / 09272007

Survey Summary

Survey Position: 30° 15' 43.9" N, 088° 14' 46.9" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2007-270.16:09:48.000 (09/27/2007)
DP Dataset: h-11304 / nrt1_1211_dp_nonechosounder / 2007-270 / 09272007
Profile/Beam: 1/1
Charts Affected: 11374_1, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

White spar buoy with red stripe and white light. "Mobay Storage Hazard Area Keep Clear". There is no indication of extent of storage area. DP taken to indicate buoy location.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h-11304/nrt1_1211_dp_nonechosounder/2007-270/09272007	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends charting buoy in current survey location.

S-57 Data

Geo object 1: Buoy, special purpose/general (BOYSPP)
Attributes: BOYSHP - 5:spar (spindle)
 CATSPM - 13:private mark
 COLOUR - 1,3:white,red
 COLPAT - 5:stripes (direction unknown)
 INFORM - Chart private aid special purpose buoy. White spar buoy with red stripe and white light. "Mobay Storage Hazard Area Keep Clear". There is no indication of extent of storage area.
 SORDAT - 20071009
 SORIND - US,US,survey,H11304

Office Notes

Concur. Chart special purpose buoy at survey location.

2 - AWOIS Features

2.1) AWOIS #3437 - RUDDIE O

No Primary Survey Feature for this AWOIS Item

Search Position: 30° 15' 45.7" N, 088° 16' 00.0" W
Historical Depth: [None]
Search Radius: 200
Search Technique: S2, SWMB, SD,ES,VS
Technique Notes: [None]

History Notes:

HISTORY ■ NM7/63(811)--NAVAL HYDRO. OFFICE; REPORTED THE M/V "RUDDIE O" SUNK IN 7.5 FT ■ IN APPROXIMATELY LAT.30-15-45N, LONG.88-16-00W. SIX FEET OF WHEEL HOUSE IS ■ REPORTED ABOVE THE WATER. ■ SOURCE UNKNOWN--SUBM. WRECK; SAME POSITION. ■ D65/D78/84-87--OPR-J482-84; NEITHER VERIFIED NOR DISPROVED. (UPDATE 3/89 LQ)

Survey Summary

Charts Affected: 11374_1, 11373_1, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

AWOIS 3437 Radius was partially covered with 200%SSS coverage. Entire assigned radius was not covered by survey due to water depth. While no detection was evident in SSS coverage, insufficient grounds for disapproval are present, therefore removal from chart cannot be justified.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11304_AWOIS	AWOIS # 3437	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends retaining AWOIS 3437 as charted.

S-57 Data

[None]

Office Notes

Concur. Retain as charted.

2.2) AWOIS #3441 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 30° 15' 59.7" N, 088° 12' 36.0" W
Historical Depth: [None]
Search Radius: 50
Search Technique: VS,SD,S2,DI,MB
Technique Notes: [None]

History Notes:

LNM34/80(8/13/80)-- 8TH CGD; REPORTED A PILING 50 TO 75FT SOUTHWEST OF PASS■AUX HERONS BUOY 32 EXTENDING 8" ABOVE WATER. (PILE PA). SCALED IN LAT ■30-15-59N, LONG.88-12-36N, AT 1:40,000 (CHT 11374-A)■ D65/D78/84-87--OPR-J482-84; NEITHER VERIFIED NOR DISPROVED. (UPDATE 3/89 LQ)

Survey Summary

Charts Affected: 11374_1, 11378_6, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

Item had 200% coverage over most of the search radius. Part of radius is in water too shallow for 200%SSS coverage, therefore this item was not investigated fully.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11304_AWOIS	AWOIS # 3441	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends removing "pile PA".

S-57 Data

[None]

Office Notes

Do not concur. Retain as charted.

2.3) AWOIS #12352 - UNKNOWN

No Primary Survey Feature for this AWOIS Item

Search Position: 30° 16' 57.7" N, 088° 08' 57.0" W
Historical Depth: [None]
Search Radius: 100
Search Technique: SD, S2, SWMB, ES, DI
Technique Notes: SEARCH NOT REQUIRED SOUTH OF NORTHERN CHANNEL LIMITS

History Notes:

HISTORY ■ LNM-23/86--A 17 FOOT P/C HAS BEEN REPORTED SUNK 100 YARDS NORTH AND 100 YARDS EAST OF PASS AUX HERONS CHANNEL BUOY 20 IN APPROXIMATE POSITION 30-16-57N, 88-08-57W (ENTERED 3/04, SPS)

Survey Summary

Charts Affected: 11377_1, 11378_6, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

AWOIS 12352 Radius was partially covered with 200%SSS coverage. Entire assigned radius was not covered by survey due to shallow water depths. While no detection was evident in SSS coverage, insufficient grounds for disproof are present.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11304_AWOIS	AWOIS # 12352	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends retaining wreck as charted.

S-57 Data

[None]

Office Notes

Concur. Retain as charted.

2.4) AWOIS #12356 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 30° 16' 09.3" N, 088° 10' 52.1" W
Historical Depth: [None]
Search Radius: 200
Search Technique: SD, S2, SWMB, ES, DI
Technique Notes: TWO OBSTRUCTIONS SHOWN ON CHART 11378 AND ONLY ONE ON 11374. SEARCH RADIUS IS 200M TO ENCOMPASS BOTH FEATURES.

History Notes:

HISTORY ■ LNM-34/03--ADD SYMBOL: "SUBMERGED OBSTRUCTION (PA)" (CGD8 136-03) 30/16/09.278N - 088/10/52.063W. (ENTERED 3/04, SPS) ■ ■ ■ ***PER TELCON WITH USCG, CG MOORING LOST IN APPROXIMATE POSITION 30-16-09.3N 088-10-52.1W, CG COULD NOT LOCATE AS OF 8/15/03. (UPDATED 4/04 SPS).

Survey Summary

Charts Affected: 11374_1, 11378_6, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

Partial coverage of AWOIS 12356 radius was covered by 200% SSS coverage. Outside the channel, SSS coverage was unobtainable due to shallow water depth. Item not detected.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11304_AWOIS	AWOIS # 12356	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends retaining as charted.

S-57 Data

[None]

Office Notes

Concur. Retain as charted.

2.5) AWOIS #12357 - UNKNOWN**No Primary Survey Feature for this AWOIS Item**

Search Position: 30° 15' 48.7" N, 088° 12' 18.0" W
Historical Depth: [None]
Search Radius: 200
Search Technique: SD, S2, SWMB, ES, DI
Technique Notes: [None]

History Notes:

HISTORY ■ LNM-23/86--A 17 FOOT P/C IS REPORTED SUNK SOUTH OF PASS AUX HERONS CHANNEL IN APPROXIMATE POSITION 30/15/48N, 88/12/18W (136-86) REF BNM 1401/86. (ENTERED 3/04, SPS)

Survey Summary

Charts Affected: 11374_1, 11378_6, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

AWOIS 12357 radius not investigated due to depth of water at AWOIS location. Wreck was neither proved nor disproved.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11304_AWOIS	AWOIS # 12357	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends retaining "Wk" as charted.

S-57 Data

[None]

Office Notes

Concur. Retain as charted.

2.6) AWOIS #12358 - UNKNOWN**No Primary Survey Feature for this AWOIS Item**

Search Position: 30° 15' 39.6" N, 088° 15' 44.4" W
Historical Depth: [None]
Search Radius: 100
Search Technique: SD, S2, SWMB, ES, DI
Technique Notes: [None]

History Notes:

HISTORY ■ LNM-54/92--ADD DANGEROUS WRECK, BLUE TINT AND LABEL: PA AT 30-15-39.600N - 088-15-44.400W. LNM LANGUAGE SUBMITTED BY NOS BASED ON CORPS SURVEY (BP-177141) WHICH DEPICTS WRECK. (ENTERED 3/04, SPS)

Survey Summary

Charts Affected: 11374_1, 11373_1, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

AWOIS item 12358 radius was partially covered by survey with 200%SSS. Item not found. Insufficient percentages of investigation are present to warrant disapproval.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11304_AWOIS	AWOIS # 12358	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends retaining AWOIS 12358 as charted.

S-57 Data

[None]

Office Notes

Concur. Retain as charted.

2.7) AWOIS #3512 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 30° 17' 04.9" N, 088° 08' 07.3" W
Historical Depth: [None]
Search Radius: 150
Search Technique: ES,VS,MB,S2
Technique Notes: [None]

History Notes:

UNKNOWN SOURCE--OBSTRUCTIONS PA. SCALED IN LAT.30/17/07.06N, LONG.088/08/06.4W. ■AT 1:40,000 (CHT 11378-B) ANOTHER OBSTRUCTION LOCATED IN ■POS. 30/17/02.57, 088-08-08.13 NAD 83. ■D65/D78/84-87--OPR-J482-84; NEITHER VERIFIED NOR DISPROVED. (UPDATE 3/89 LQ)

Survey Summary

Charts Affected: 11377_1, 11378_6, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

H11304 side scan sonar quality in the vicinity of the AWOIS investigations was insufficient for feature disproval. AWOIS Item #3512 item should be retained as charted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
J373awois04	AWOIS # 3512	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

[None]

Office Notes

Retain as charted.

2.8) AWOIS #12353 - UNKNOWN

No Primary Survey Feature for this AWOIS Item

Search Position: 30° 16' 58.2" N, 088° 08' 19.2" W
Historical Depth: [None]
Search Radius: 100
Search Technique: VS, SD, S2, SWMB, ES, DI
Technique Notes: [None]

History Notes:

HISTORY ■ LNM26/00--ADD SYMBOL: "VISIBLE WRECK (PA)" (ABANDONED SHRIMP BOAT) (CGD8 087-00). (ENTERED 3/04, SPS) ■ ■ ■ ***PER TELECON WITH USCG, 40-50 FOOT SHRIMP BOAT. WRECK WAS VISIBLE AND ABANDONED AS OF 2000. (UPDATED 4/04, SPS).

Survey Summary

Charts Affected: 11377_1, 11378_6, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

H11304 side scan sonar quality in the vicinity of the AWOIS investigations was insufficient for feature disproval. AWOIS Item #12353 item should be retained as charted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
J373awois04	AWOIS # 12353	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

[None]

Office Notes

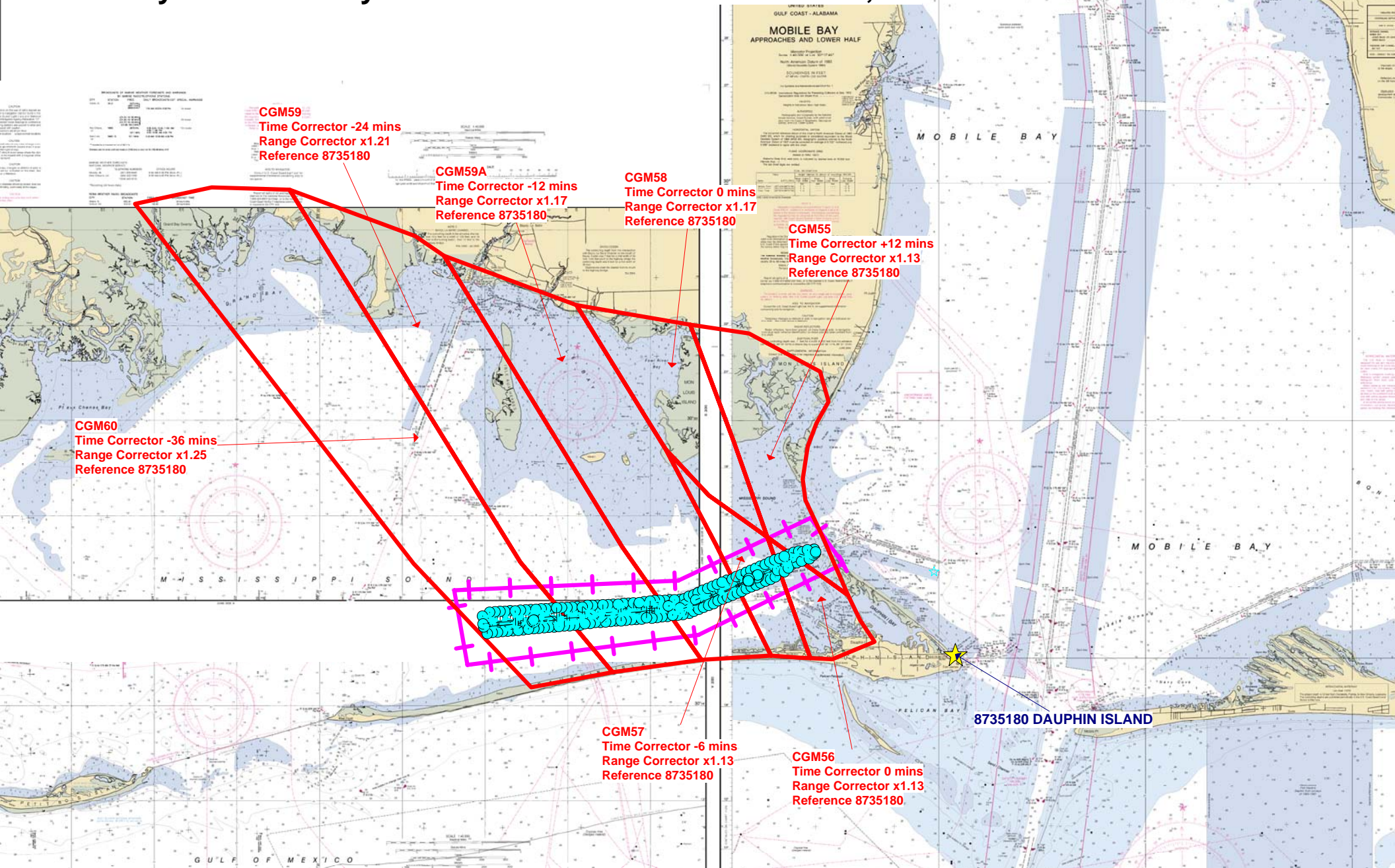
Retain as charted.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910



Final Tidal Zoning for OPR-J373-NRT1-2004, H11304 Vicinity of Mobile Bay Entrance Channel-Central Portion, AL



CGM59
Time Corrector -24 mins
Range Corrector x1.21
Reference 8735180

CGM59A
Time Corrector -12 mins
Range Corrector x1.17
Reference 8735180

CGM58
Time Corrector 0 mins
Range Corrector x1.17
Reference 8735180

CGM55
Time Corrector +12 mins
Range Corrector x1.13
Reference 8735180

CGM60
Time Corrector -36 mins
Range Corrector x1.25
Reference 8735180

CGM57
Time Corrector -6 mins
Range Corrector x1.13
Reference 8735180

CGM56
Time Corrector 0 mins
Range Corrector x1.13
Reference 8735180

8735180 DAUPHIN ISLAND

This Document is for Office Process use only and is intended to supplement, not supersede or replace, information/recommendations in the Descriptive or Evaluation Reports

AHB PRE-COMPILATION PROCESS

REGISTRY No.	H11304
PROJECT No.	OPR-J373-NRT1-04
FIELD UNIT	NRT-1
PRE-COMPILER	M. LEONARD TYSON
LARGEST SCALE CHART	Chart 11378, 35th Ed., 20080301 Chart 11374, 34th Ed., 20071001
CHART SCALE	1:40,000
SURVEY SCALE	1:10,000
DATE OF SURVEY	20071009
CONTENT REVIEW DATE	12/02/2008

Components	File Names
<i>Product Surface</i>	
<i>Shifted Surface</i>	
<i>Contour Layer</i>	H11304_Contours.hob
<i>Survey Scale Soundings</i>	H11304_SS_Soundings.hob
<i>Chart Scale Soundings</i>	H11304_CS_Soundings.hob
<i>ENC Retain Features</i>	H11304_ENC_Features.hob
<i>Feature Layer</i>	H11304_Features.hob
<i>Meta-Objects Layer</i>	H11304_MetaObjects.hob
<i>Blue Notes</i>	H11304_BlueNotes.hob

SPECIFICATIONS:

- I. COMBINED SURFACE: **N/A**
 - a. File name: Resolution: _____ m
 - b. Final Grid Location: _____
- II. PRODUCT SURFACE (SOUNDINGS): **N/A**
 - a. Scale:
 - b. Radius: m
 - c. Resolution: _____ m
 - d. Depth
 - i. Minimum: **-0.10m**
 - ii. Maximum: **24.00_m**

PRODUCT SURFACE (CONTOURS): **N/A (Contours were drawn manually)**

 - a. Scale:
 - b. Radius:
 - c. Resolution: SHIFTED SURFACE:
Single Shift Value: _____ [-0.229m (feet), (\leq 10 fathoms)]
[-1.372m (fathoms), ($>$ 10 fathoms)]
- III. CONTOUR LAYER:
 - a. Use a Depth List:
 - b. Depth List :

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- c. Output Options:
 - i. Create contour lines:
 - 1. Line Object:
 - 2. Value Attribute:

IV. SOUNDING SELECTION:

- a. Selection Criteria:
 - i. Radius
 - ii. Shoal biased Yes
 - iii. Use Single-Defined Radius: 15 distance on ground (m)
 - iv. Filter:

V. FEATURES:

- a. Brought in from Survey
 - Total No. 2
- b. Brought in from ENC
 - ENC: 13
 - Total No. 15

VI. META-OBJECTS:

- a. M_COVR attributes

Acronym	Value
SORDAT	20071009
CATCOV	1_Coverage Available
SORIND	Us,Us,Survy,H11304

- b. M_QUAL attributes

Acronym	Value
CATZOC	6_U_Data_Not Assessed
INFORM	Registry Number, Project Number, Vessel
POSACC	10
SORDAT	20071009
SORIND	Us,Us,Survy,H11304
SUREND	20071009
SURSTA	20060830
TECSOU	1 VBES

- c. DEPART attributes

Acronym	Value
DRVALV 1	0.34
DRVALV2	27.559
SORDAT	20071009
SORIND	Us,Us,nsurf,H11304

- d. M_CSCL attributes **N/A**

Acronym	Value
CSCALE	
SORDAT	
SORIND	

VII. NOTES:

**ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT to Accompany
Survey H11304 (1:10,000)**

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 DATA PROCESSING

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.

HSTP PYDRO version 8.7 r2537
CARIS HIPS/SIPS version 6.1 SP1
CARIS Bathy Manager version 2.1
DKART INSPECTOR, version 5.0 Build 732 SP1
CARIS HOM version 3.3
CARIS S57 Composer version 2.0
MAPINFO 9.0 RB36

B.2. QUALITY CONTROL

B.2.1. H-Cell

The AHB source depth grid for the survey's nautical chart update product entailed the creation of a single grid at two meter resolution for all the vertical beam bathymetry. The survey scale selected soundings were extracted from the two meter grid. The selected sounding set is more than 16-32 times the number of charted depths generated at a scale of 1:10,000. The chart scale selected soundings are a subset of the survey scale selected soundings at a scale of 1:40,000. 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), features (WRECKS, OBSTNS, SBDARE BCNSPP), meta objects (M_COVR, M_QUAL), depth areas (DEPARE) and cartographic Blue Notes (\$CSYMB). The individual SAHOB files were inserted into one BASE Editor feature layer and exported to S57 format in order to create the H-Cell deliverable.

The completed H-Cell was exported as an 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 scale units (ENC_CS.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 H11304 CARIS H-Cell final deliverables include the following products:

US511304_CS.000	1:40,000 Scale	F00539 H-Cell with Chart Scale Selected Soundings
US511304_SS.000	1:10,000 Scale	F00539 Selected Soundings (Survey Scale)

B.2.2. Junctions

Survey H11304 junctions with survey H11305 of the same project to the east. Junction analysis will be performed during office processing of H11305.

C. VERTICAL AND HORIZONTAL CONTROL

Final vertical correction processing was completed by the field unit/office personnel with no additional correction required by Atlantic Hydrographic Branch. The field unit/office personnel applied verified water levels in conjunction with the final zoning for H11304. Sounding datum is Mean Lower Low Water (MLLW). The operating National Water Level Observation Network (NWLON) station at Dauphin Island (873-5180) served as datum control for the survey area.

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 16. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

11374 (34th Edition, 20071001)
Corrected through NM 11/18/2008
Corrected through LNM 11/29/2008
Scale 1:40,000

11378 (35th Edition, 20080301)
Corrected through NM 11/18/2008
Corrected through LNM 11/29/2008
Scale 1:40,000

ENC Comparison**US5MS21M.000**

Dauphin Island Ala to Horn Island Miss
Edition 17
Update Application Date 2008-12-04
Issue Date 2008-12-04
References: Chart 11374

US5AL12M.000

Santa Rosa Sound to Wolf Bay
Edition 14
Update Application Date 2008-07-09
Issue Date 2008-08-11
References: Chart 11378

US5AL13M.000

Santa Rosa Sound to Wolf Bay
Edition 14
Update Application Date 2008-07-09
Issue Date 2008-08-11
References: Chart 11378

D.1.1 Hydrography**ICW / Pass Aux Herons Channel**

Office processing identified several areas of shoaling occurring on the channel edges in the vicinity of the GP's listed in *Table H11304-1* below. The encroachment of 11 ft soundings on the channel edges is primarily restricted to the ENC channel limits which exist slightly outside the raster chart 11378 limits. It was also observed during office processing that the bathymetry was subject to tidal correction error in this area of up to one foot of variance. This error is within the tolerance of tidal error, but may be considered as a contributing factor to the apparent shoaling.

Additionally, the Gulf Coast NOAA Navigation Manager was advised via email on Thu, 18 Dec 2008 of this issue and inquiring about any dredging activity that may have taken place after this data was collected, therefore, superseding any conflicts with the ICW project depth of 12feet. At this time a response has not been received. The Hydrographer recommends and defers to MCD Update Services Branch that they try and source the recent ACOE survey data before considering H11304 survey data within the channel limits.

Table H11304-1		
Latitude	Longitude	Depth
30-16-45.015N	088-09-25.080W	11 ft
30-16-39.891N	088-09-38.793W	11 ft
30-16-35.296N	088-09-51.389W	11 ft
30-16-16.727N	088-10-40.944W	11 ft
30-16-04.982N	088-11-08.123W	11 ft
30-16-23.116N	088-10-23.955W	11 ft
30-16-11.730N	088-10-54.732W	11 ft
30-16-14.459N	088-10-47.504W	11 ft

D.2.1. Aids to Navigation

All ATON's addressed and positioned are discussed in the DR. AHB recommends deferring the charting disposition of these navigational aids to Marine Chart Division, Nautical Data Branch.

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 survey is adequate to supersede the charted bathymetry within the common area. Any features not specifically addressed either in the H-Cell BASE Cell File or the Blue Notes should be retained as charted. Refer to the Descriptive Report for further recommendations by the hydrographer.

APPROVAL SHEET
H11304

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.

Leonard Tyson
Hydrographic Intern
Atlantic Hydrographic Branch

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