

H11307

NOAA FORM 76-35A U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY DESCRIPTIVE REPORT	
<i>Type of Survey:</i>	Basic Hydrographic
<i>Registry Number:</i>	H11307
LOCALITY	
<i>State:</i>	Alabama
<i>General Locality:</i>	Mobile Bay
<i>Sub-locality:</i>	Mobile Point
2004-7	
CHIEF OF PARTY	
Mark McMann, NRT1	
DATE	LIBRARY & ARCHIVES

NOAA FORM 77-28 (11-72)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER: <p style="text-align: center; font-size: 1.2em;">H11307</p>	
<p style="font-size: 1.2em; margin: 0;">HYDROGRAPHIC TITLE SHEET</p>			
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:	<p style="margin-left: 20px;">Alabama</p>		
General Locality:	<p style="margin-left: 20px;">Mobile Bay</p>		
Sub-Locality:	<p style="margin-left: 20px;">Entrance to Mobile Point</p>		
Scale:	<p style="margin-left: 20px;">1:10,000</p>	Date of Survey:	<p style="margin-left: 20px;">03/12/04 to 10/25/07</p>
Instructions Dated:	<p style="margin-left: 20px;">06/09/2004</p>	Project Number:	<p style="margin-left: 20px;">OPR-J373-NRT1-04</p>
Vessel:	<p style="margin-left: 20px;">NOAA Launch S-1211, NRT-1</p>		
Chief of Party:	<p style="margin-left: 20px;">Mark McMann</p>		
Surveyed by:	<p style="margin-left: 20px;">MJM, EAL, IW, LTP, SP</p>		
Soundings by:	<p style="margin-left: 20px;">ODOM CVX2 single-beam echosounder</p>		
Graphic record checked by:	<p style="margin-left: 20px;">N/A</p>		
Protracted by:	<p style="margin-left: 20px;">N/A</p>	Automated Plot:	<p style="margin-left: 20px;">N/A</p>
Verification by:	<p style="margin-left: 20px;"><i>Atlantic Hydrographic Branch</i></p>		
Soundings in:	<p style="margin-left: 20px;">Meters at MLLW</p>		
Remarks: <i>Bold, Italic, Red notes in the Descriptive Report were made during office processing.</i> <i>1) All Times are UTC.</i> <i>2) This is a Standard Navigable Area Hydrographic Survey.</i> <i>3) Projection is UTM Zone 18.</i>			

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DESCRIPTIVE REPORT

to accompany
Basic Hydrographic Survey H11307
OPR-J373-NRT1-04

Year of Survey: 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. **Filed with original field records.*

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.

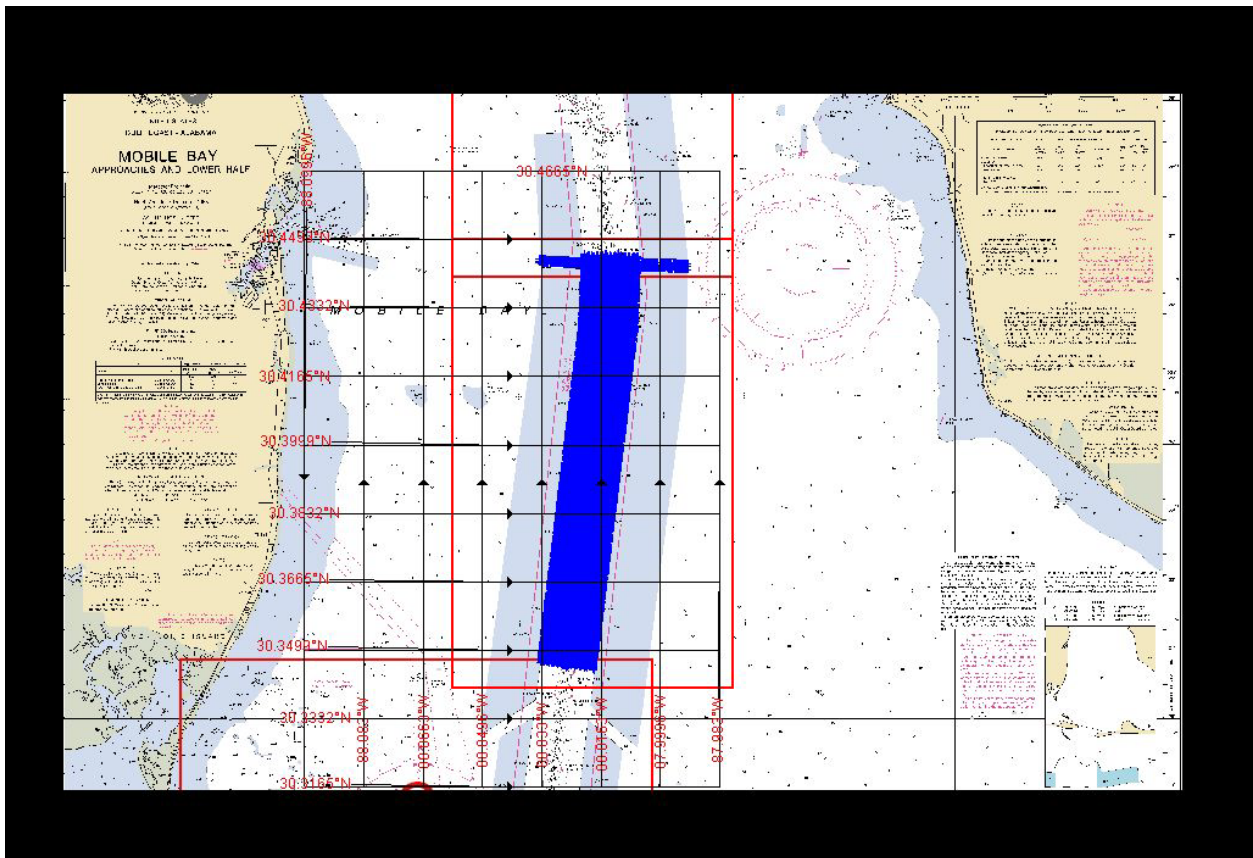
The area surveyed by NRT1, consisted of approximately 5.0 square nautical miles (SNM) of Mobile Bay in the entrance to Mobile Bay. Both singlebeam echosounder and side scan sonar were acquired within the survey limits, wherever possible.

Survey Limits for Sheet D, H11307 are as follows:

30° 20'52" N 88°00'23" W
30°16'43" N 88°08'05" W

Survey Dates: March 06, 2007 (DN: 065) to October 25, 2007 (DN: 298).

Survey limits are displayed graphically:



B. DATA ACQUISITION AND PROCESSING

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. **Filed with original field records.*

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.

B.2. QUALITY CONTROL

The integrity of the survey data for H11307 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 20 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 selected in Sonarpro to facilitate their identification while processing. Any contacts, which were determined to be significant, were developed using SBES.

Crosslines

Crosslines were collected in a zig-zag pattern over the length of the project area. A total of 7.0 linear nautical miles (LNM) of crosslines were acquired by the field party. This is approximately 3.3 percent of mainscheme acquisition (210.0 LNM). A visual inspection of crossline data and main scheme data showed good comparison.

Junctions

No junctioning surveys were provided for comparison with this project. *Concur with clarification, survey H11307 junctions with H11306 of the same project to the South, and H11308 to the North. Junction analysis will be performed during office processing of H11307.*

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. **Filed with original field records.*

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

Zoning was provided on the project CD.

A Request for Approved Water Levels letter was sent to N/OPS1 on Dec. 18, 2007 and is included in Appendix IV*. Approved Water Levels were received by the NRT on Jan. 04, 2007 and the approved water levels were reapplied in CARIS.

**Filed with original field records.*

C.2. HORIZONTAL CONTROL

The horizontal datum used for this survey is the North American Datum 1983 (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.

D. RESULTS AND RECOMMENDATIONS

D.1. CHART COMPARISON

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

Chart	Edition	Print Date	Scale
11380	1st	10/2005	1:20,000
11377	6 th	01/2007	1:40,000
11376	52nd	06/2007	1:80,000

ENC Cell	Last Updated	Corresponding Chart	Version
US4AL11M	08/06/2007	11376	1
US5AL12M	1/26/2004	11377	1

General Agreement with Charted soundings

All current H11307 surveyed soundings in the Mobile Channel have been superseded by US Army Corp of Engineers survey and dredge work. *(See also Evaluation Report D.1.1).*

Comparison with the latest chart revealed excellent agreement with charted soundings. Current survey depths are 1 to 2 feet deeper than charted depths in most areas. In some areas current survey soundings are 3-5 feet deeper than charted soundings. *Concur.*

A submerged obstruction charted at 30° 21' 51"N Lat, 88° 01' 18" W Lon was not assigned as an AWOIS item, however it was covered by 200% side scan coverage and nothing was found. The hydrographer recommends removal of the charted submerged wreck. *Concur.*

A "Pile PA" charted at 30° 22' 57"N Lat., 88° 00' 52"W Lon. was not assigned as an AWOIS item but was covered by 200% side scan sonar and nothing was found. The hydrographer recommends removal of the Pile PA from the chart. *Do not concur. Side scan is of poor quality, Retain Pile PA.*

AWOIS Item Investigations

There were a total of 2 AWOIS items assigned to the Field Party in Sheet D. The radius of these items were covered using 200% SSS.

Results of all AWOIS investigations are contained in Appendix II.

Dangers to Navigation

One DTON was identified in this survey. It was submitted on Dec. 17, 2007. A copy of the report is contained in the Appendices to the Descriptive Report. *Concur.*

Shoreline

No shoreline features were investigated by the field party.

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.

Ferry Routes

There are no ferry routes in the survey area.

Submarine Cables and Pipelines

There were no charted pipelines within the survey area.

Bridges and Overhead Cables

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

APPROVAL SHEET

OPR-J373-NRT1-04

Alabama

Mobile Bay

Vicinity of Mobile Bay Entrance Channel-Central Portion

Survey Registry No. H-11307

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.

Digitally signed by Mark J. McMann
DN: cn=Mark J. McMann, o=NRT-1,
ou=NSD, email=Mark.McMann@noaa.
gov, c=US
Date: 2008.04.24 12:47:25 -05'00'

Submitted: _____

Mark J. McMann - Team Leader
Navigation Response Team 1

APPENDIX I: DTON REPORTS

There is one Danger to Navigation (DTon) to report for this survey.

DTON Report: H11307 #1

Registry Number: H11307
State: Alabama
Locality: Mobile Bay
Sub-locality: Vicinity of Mobile Bay Entrance Channel-Central Portion
Project Number: OPR-J373-NRT1-04
Survey Date: 10/25/2007

Charts Affected

Number	Version	Date	Scale
11380	1st Ed.	10/01/2005	1:20000
11377	5th Ed.	06/01/2003	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	Sounding	10.38 m	30° 26' 30.890" N	088° 00' 46.234" W	---

1.1) Profile/Beam - 164/1 from h11307 / 1211_sb / 2007-298 / 005_1708**DANGER TO NAVIGATION****Survey Summary**

Survey Position: 30° 26' 30.890" N, 088° 00' 46.234" W
Least Depth: 10.38 m
Timestamp: 2007-298.17:08:20.957 (10/25/2007)
Survey Line: h11307 / 1211_sb / 2007-298 / 005_1708
Profile/Beam: 164/1
Charts Affected: 11380_1, 11377_1, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

Unknown contact detected in 200% SSS coverage. Item was investigated using SBES in a star pattern. Contact is determined to be a DTON due to shoalest depth vs. controlling depth of channel.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11307/1211_sb/2007-298/005_1708	164/1	0.00	000.0	Primary
h11307/1211sss500k/2007-191/sonar_data070710161800	0001	3.81	330.9	Secondary
h11307/1211sss500k/2007-071/mb070312161400	0001	4.59	091.8	Secondary

Hydrographer Recommendations

Hydrographer recommends charting contact as a sounding on an obstruction in current survey position.

Cartographically-Rounded Depth (Affected Charts):

34ft (11380_1, 11377_1, 11376_1)

5 ½fm (1115A_1, 11360_1, 11006_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 1:depth known
 SORDAT - 20071025
 SORIND - US,US,Survey,H11307

TECSOU - 1:found by echo-sounder

VALSOU - 10.377 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

APPENDIX II: SURVEY FEATURES REPORTS

Following are item investigation reports detailing three groups of features:

- a) AWOIS Items
- b) Significant Uncharted Features
- c) Non-AWOIS Charted Features & Notes

H11307 Features Report

Registry Number: H11307
State: Alabama
Locality: Mobile Bay
Sub-locality: Vicinity of Mobile Bay Entrance Channel-Central Portion
Project Number: OPR-J373-NRT1-04
Survey Dates: 10/25/2007 - 06/03/2009

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11380	1st	10/01/2005	1:20,000 (11380_2)	USCG LNM: 05/05/2009 (05/12/2009) NGA NTM: 09/20/2003 (05/16/2009)
11377	8th	04/01/2009	1:40,000 (11377_1)	USCG LNM: 05/05/2009 (05/12/2009) NGA NTM: 11/19/2005 (05/16/2009)
11376	53rd	08/01/2008	1:80,000 (11376_1)	USCG LNM: 05/05/2009 (05/12/2009) NGA NTM: 11/19/2005 (05/16/2009)
11360	43rd	11/01/2008	1:456,394 (11360_1)	[L]NTM: ?
1115A	43rd	11/01/2008	1:456,394 (1115A_1)	[L]NTM: ?
11006	32nd	08/01/2005	1:875,000 (11006_1)	[L]NTM: ?
411	52nd	09/01/2007	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	064 - Buoy Oc R 4s 62 ft Fl 4s 12 Ft 5M	Red buoy	[None]	30° 24' 42.0" N	088° 00' 34.7" W	---
1.2	0001 - Uncharted subm post	Pile	[None]	30° 26' 41.0" N	088° 00' 59.2" W	---
2.1	UNKNOWN - dang. Wk PA symbol - disproven	AWOIS	[no data]	[no data]	[no data]	---
2.2	OBSTRUCTION - 6 ft. stump - disproven	AWOIS	[no data]	[no data]	[no data]	---
3.1	164/1 - dang. 34 Obstn	Obstruction	10.53 m	30° 26' 30.9" N	088° 00' 46.2" W	---

1.1) 064 - Buoy Oc R 4s 62 ft Fl 4s 12 Ft 5M

Survey Summary

Survey Position: 30° 24' 42.0" N, 088° 00' 34.7" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2007-298.16:24:43.000 (10/25/2007)
DP Dataset: h11307 / nrt1_1211_dp_nonechosounder / 2007-298 / 10252007
Profile/Beam: 1/1
Charts Affected: 11380_2, 11377_1, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

R N "WR 44A" is present is current DP location. It is currently uncharted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11307/nrt1_1211_dp_nonechosounder/2007-298/10252007	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends charting buoy at current survey DP location.

S-57 Data

Geo object 1: Buoy, isolated danger (BOYISD)
Attributes: BOYSHP - 1:conical (nun, ogival)
 COLOUR - 3:red

Office Notes

Concur. Defer final charting disposition of aids to navigation to Marine Chart Division (MCD), Nautical Data Branch (NDB), Source Information Unit (SIU).

1.2) 0001 - Uncharted subm post

Survey Summary

Survey Position: 30° 26' 41.0" N, 088° 00' 59.2" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2009-154.03:21:27 (06/03/2009)
Survey Line: h11307 / 1211sss500k / 2007-067 / mb070308164300
Contact/Point: 0001/1
Charts Affected: 11380_2, 11377_1, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

Subm Post

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11307/1211sss500k/2007-067/mb070308164300	0001	0.00	000.0	Primary

Hydrographer Recommendations

Identified during office processing while investigating AWOIS Item # 12347, a 6 ft. stump. Feature is 0.7m long, 0.8m wide, with a height of 0.52m. Chart as a subm post.

S-57 Data

Geo object 1: Pile (PILPNT)
Attributes: CATPLE - 3:post
 CONVIS - 2:not visual conspicuous
 HEIGHT - 0.52 m

Office Notes

Chart a subm post in Latitude 30°26'40.964"N, Longitude 88°00'59.199"W.

2.1) AWOIS #11627 - UNKNOWN - dang. Wk PA symbol - disproven

No Primary Survey Feature for this AWOIS Item

Search Position: 30° 24' 30.0" N, 088° 00' 54.0" W
Historical Depth: [None]
Search Radius: 200
Search Technique: S2,MB,ES,SD
Technique Notes: [None]

History Notes:

HISTORY■ LNM08/97--02/18/97, 8TH CGD; SUNKEN HOUSEBOAT PA. IN 30-24-30N, 88-00-54W (NAD 83). (ENT 8/02, PSH)■ S-J610-WH-02--HLS: 200% in 75% of 200m AWOIS search radius. The 75% of search radius was covered with 200% SSS and no signifigant contacts were acquired. Hydrographer recommends retaining charted wreck in location. Further investigation is recommended. UPDATED 3/04 MCR

Survey Summary

Charts Affected: 11380_2, 11377_1, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

Entire AWOIS Radius covered with 200% SSS coverage. No contacts were detected.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11307_AWOIS	AWOIS # 11627	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends removing "Wrk PA" from chart.

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)
Attributes: INFORM - AWOIS 11627 - Dang. Wk PA symbol - disproven

Office Notes

AHB concurs w/ the field, AWOIS item #11627 is disproved. Delete charted Wk PA symbol from chart and update AWOIS database.

2.2) AWOIS #12347 - OBSTRUCTION - 6 ft. stump - disproven

No Primary Survey Feature for this AWOIS Item

Search Position: 30° 26' 44.0" N, 088° 00' 54.4" W
Historical Depth: [None]
Search Radius: 75
Search Technique: SD, S2, SWMB, ES, DI, VS
Technique Notes: [None]

History Notes:

HISTORY ■ LNM40/92-- ADD SYMBOL: "SUBMERGED OBSTRUCTION (PA)" (6 FT STUMP) (CGD8 241-92) ■■■***PER TELCON WITH USCG, 6-FOOT DIAMETER STUMP REPORTED BY F/V MASTER WADE ON THE CHANNEL SIDE OF MOBILE CHANNEL LT 49 (UPDATED 4/04, SPS).

Survey Summary

Charts Affected: 11380_2, 11377_1, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
J373awois09AHB	AWOIS # 12347	0.00	000.0	Primary

Hydrographer Recommendations

Obstn PA was not visible in side scan, but a subm post was identified nearby. No six foot diameter stump is visible in the 75 m awois radius, consider AWOIS 12347 disproved, update AWOIS database.

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)
Attributes: INFORM - AWOIS Item #12347 (6 ft. stump) is disproven

Office Notes

Delete the dangerous Obsn PA and update the AWOIS database, AWOIS Item #12347 is disproven.

3.1) 164/1 - dang. 34 Obstrn**DANGER TO NAVIGATION****Survey Summary**

Survey Position: 30° 26' 30.9" N, 088° 00' 46.2" W
Least Depth: 10.53 m (= 34.56 ft = 5.760 fm = 5 fm 4.56 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2007-298.17:08:20.957 (10/25/2007)
Survey Line: h11307 / 1211_sb / 2007-298 / 005_1708
Profile/Beam: 164/1
Charts Affected: 11380_2, 11377_1, 11376_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

Unknown contact detected in 200% SSS coverage. Item was investigated using SBES in a star pattern. Contact is determined to be a DTON due to shoalest depth vs. controlling depth of channel.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11307/1211_sb/2007-298/005_1708	164/1	0.00	000.0	Primary
h11307/1211sss500k/2007-191/sonar_data070710161800	0001	3.81	330.9	Secondary
h11307/1211sss500k/2007-071/mb070312161400	0001	4.59	091.8	Secondary

Hydrographer Recommendations

Hydrographer recommends charting contact as a sounding on an obstruction in current survey position.

Cartographically-Rounded Depth (Affected Charts):

34ft (11380_2, 11377_1, 11376_1)

5 $\frac{3}{4}$ fm (1115A_1, 11360_1, 11006_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
STATUS - 1:permanent

TECSOU - 1:found by echo-sounder

VALSOU - 10.534 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart a dangerous Obstn with a depth of 34 ft. in Latitude 30°26'30.892"N, Longitude 88°00'46.226"W.



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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : December 26, 2007

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-J373-NRT1-2004
HYDROGRAPHIC SHEET: H11307

LOCALITY: Vicinity of Mobile Bay Entrance Channel - Central Portion, AL
TIME PERIOD: March 6, 2007 - October 26, 2007

TIDE STATION USED: 873-5180 Dauphin Island, AL
Lat. 30° 15.08' N Long. 088° 04.7' W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.361 meters

REMARKS: RECOMMENDED ZONING

Use zone(s) identified as: CGM48, CGM49, CGM50, & CGM51

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 on the 1983-2001 National Tidal Datum Epoch (NTDE).

Stephen K. Gill

Digitally signed by Stephen K. Gill
DN: cn=Stephen K. Gill, c=US, l=Silver Spring, st=Maryland, o=National
Oceanic and Atmospheric Administration, ou=Center for Operational
Oceanographic Products & Serv., email=Stephen.Gill@noaa.gov
Reason: I attest to the accuracy and integrity of this document
Date: 2008.01.04 15:00:19 -05'00'

CHIEF, PRODUCTS AND SERVICES DIVISION

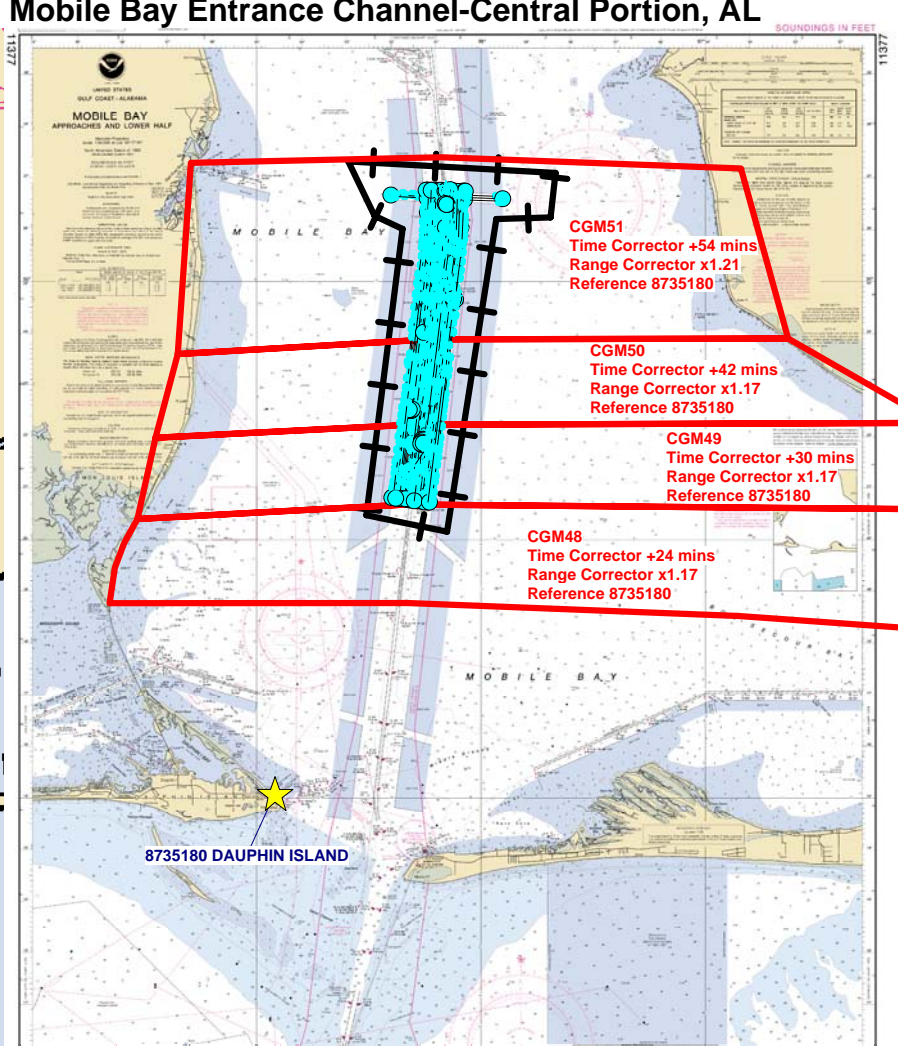


Final Tidal Zoning for OPR-J373-NRT1-2004, H11307
Vicinity of Mobile Bay Entrance Channel-Central Portion, AL

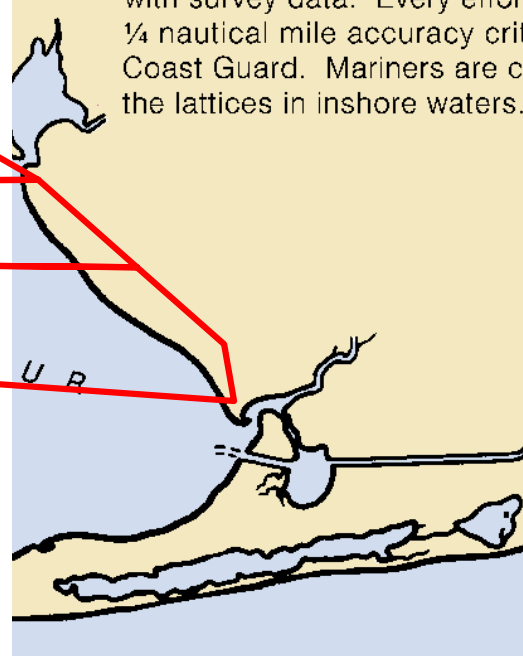


RATES ON T

7980-W 798



Loran-C correction table
 Geospatial-Intelligence Agency
 with this chart. The lines of posi
 based on theoretically deter
 gation delays. They have not
 with survey data. Every effort
 ¼ nautical mile accuracy cri
 Coast Guard. Mariners are o
 the lattices in inshore waters.



(use chart 11376)

**ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT to Accompany
Survey H11307**

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

The following software was used to process and review data at the Atlantic Hydrographic Branch (AHB):

CARIS HIPS/SIPS version 6.1 SP2 hotfix 7
Pydro version 9.4 (r2691)
CARIS BASE Manager 2.1 SP1 hotfix 10
CARIS S-57 Composer 2.0 hotfix 2
dKart Inspector V. 5.0 Build 732 (SP1)

B.2. QUALITY CONTROL

H-Cell

The AHB source depth grid was a 5m resolution shoal biased BASE surface extracted from the field submitted surface for survey H11307. Survey scale soundings were extracted from the 5m shoal biased BASE Surface generated at a 1:10000 scale using a radius of 1m. Depth curves were created by hand at the depth intervals represented on charts 11380 and 11377. Soundings were selected for charting by hand using the latest raster charts and depth contours used as background for sounding placement. Soundings were then checked for conflicts, corrected to remove conflicts, and edited to allow for proper sounding compilation placement with respect to existing charted depths outside the survey area.

The compilation products and Stand Alone HOB Files (SAHOB) are detailed in the Compilation Process Log of this document. All individual SAHOB files were assembled in BASE Editor during H-Cell compilation.

The completed H-Cell was exported as a Base 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 H11307 CARIS H-Cell final deliverables include the following products:

US511307_CS.000	1:20,000 Scale	H11307 H-Cell with Chart Scale Soundings
US511307_SS.000	1:10,000 Scale	H11307 Survey Scale Soundings

B.2. Junctions

Survey H11307 junctions with survey H11306 of the same project to the South, H11308 to the North and H11625 to the East. Junction analysis was performed during office processing of H11307.

C. VERTICAL AND HORIZONTAL CONTROL

Final vertical correction processing was completed by field 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 16.

D. RESULTS AND RECOMMENDATIONS

Chart Comparison

11380 (1st Edition, Oct./05)

Corrected through NM Oct. 01/05
 Corrected through LNM Sep. 20/05
 Scale 1:20,000

11377 (8th Edition, Apr./09)

Corrected through NM Apr. 18/09
 Corrected through LNM Apr. 07/09
 Scale 1:40,000

ENC Comparison

US5AL14M

Mobile Bay East Fowl River to Deer River Pt; Mobile Middle Bay Terminal
 Edition 2
 Update Application Date 2009-05-18
 Issue Date 2009-05-18
 References: Chart 11380

ENC Comparison (cont'd)

US5AL13M

Mobile Bay Approaches and Lower Half
Edition 24

Update Application Date 2009-05-08

Issue Date 2009-06-02

References: Chart 11377

Hydrography

USACE Project Depths

All current surveyed sounding in the Mobile Channel have been superseded by US Army Corp of Engineers (USACE) survey and dredge work. The USACE operations took place in July of 2008 after the final data of survey operations (Oct. 25, 2007).

Comparison with Prior Surveys

A comparison with prior surveys was not done during office processing in accordance with section 4. of the memorandum titled "Changes to Hydrographic Survey Processing", dated May 24, 1995.

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.

Bryan Chauveau

Bryan Chauveau
Physical Scientist
Verification of Data
Evaluation and Analysis Report

AHB COMPILATION LOG

Registry No.	H11307
Project No.	OPR-J373-NRT1-04
Field Unit	NRT-1
Pre-Compiler	M. Leonard Tyson
Compilation	Bryan Chauveau
Largest Scale Chart	<p><u>11380 (1st Edition, Oct./05)</u> Corrected through NM Oct. 01/05 Corrected through LNM Sep. 20/05 Scale 1:20,000</p> <p><u>11377 (8th Edition, Apr./09)</u> Corrected through NM Apr. 18/09 Corrected through LNM Apr. 07/09 Scale 1:40,000</p> <p><u>US5AL14M</u> Mobile Bay East Fowl River to Deer River Pt; Mobile Middle Bay Terminal Edition 2 Update Application Date 2009-05-18 Issue Date 2009-05-18 References: Chart 11380</p> <p><u>US5AL13M</u> Mobile Bay Approaches and Lower Half Edition 24 Update Application Date 2009-05-08 Issue Date 2009-06-02 References: Chart 11377</p>
Chart Scale	1:20,000
Survey Scale	1:10,000
Date Of Survey	20071025

Components	File Names
<i>Contour Layer</i>	H11307_Contours
<i>Survey Scale Soundings</i>	H11307_SS_Soundings.hob
<i>Chart Scale Soundings</i>	H11307_CS_Soundings.hob
<i>Feature Layer</i>	H11307_DepAre.hob H11307_Obstrns.hob
<i>Meta-Objects Layer</i>	H11307_M_COVR.hob H11307_M_QUAL.hob H11307_M_CSCL.hob
<i>Blue Notes</i>	H11307_BlueNotes.hob

META-OBJECTS:

M_COVR attributes

Acronym	Value
CATCOV	1 – coverage available
SORDAT	20071025
SORIND	US,US,survey,H11307

M_QUAL attributes

Acronym	Value
CATZOC	6
INFORM	H11307,NOAA Survey Launch 1211,NRT-1
POSACC	10
SORDAT	20071025
SORIND	US,US,survey,H11307
SUREND	20071025
SURSTA	20070306

M_CSCL attributes

Acronym	Value
CSCALE	1:40000

Final Grids Listing –

H11307_5m_Shoal_Extracted.hns
H11307_5m_Shoal_Extracted.xml
H11307_5m_Shoal_Extracted_Depth.bel

APPROVAL SHEET
H11307

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. 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 NOS requirements except where noted in the Evaluation Report.

Bryan Chauveau
Physical Scientist,
Atlantic Hydrographic Branch

All final products have undergone a comprehensive review as per the Atlantic Hydrographic Branch Processing Manual and are verified to be accurate and complete except where noted in the Evaluation Report.

I have reviewed the Base Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Approved:

Commander Shepard M. Smith, NOAA
Chief, Atlantic Hydrographic Branch