

**F00592**

NOAA FORM 76-35A

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

**DESCRIPTIVE REPORT**

Type of Survey: Navigable Area  
Registry Number: F00592

**LOCALITY**

State: Texas  
General Locality: Galveston,  
Sub-locality: Bolivar Roads

**2010**

CHIEF OF PARTY  
CDR Shepard M. Smith  
NOAA

LIBRARY & ARCHIVES  
DATE

**HYDROGRAPHIC TITLE SHEET**

**F00592**

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: **Texas**

General Locality: **Galveston,**

Sub-Locality: **Bolivar Roads**

Scale: **1:10,000** Date of Survey: **19 April to 15 June, 2010**

Instructions Dated: **4 April 2010** Project Number: **OPR-K380-TJ-10**

Vessel: **NOAA Ship *Thomas Jefferson***

Chief of Party: **CDR Shepard M. Smith, NOAA**

Surveyed by: ***Thomas Jefferson* Personnel**

Soundings by: **Reson 7125 multibeam echosounder/Odom Echotrak VB**

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 (Notes in Red, Bold, Italic)***

Soundings in: **Meters at MLLW**

***HCell Units: Meters at MLLW***

***The purpose of this survey is to provide contemporary surveys to update National Ocean Service (NOS) nautical charts. All separates are filed with the hydrographic data. Revisions and Red notes were generated during office processing. The processing branch concurs with all information and recommendations in the DR unless otherwise noted. Page numbering may be interrupted or non-sequential. All pertinent records for this survey, including the Descriptive Report, are archived at the National Geophysical Data Center (NGDC) and can be retrieved via <http://www.ngdc.noaa.gov/>.***

Remarks:  
***1) All Times are in UTC.***  
***2) This is a Navigable Area Hydrographic Survey.***  
***3) Projection is NAD83, UTM Zone 15.***

Table of Contents

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A. AREA SURVEYED.....4

B. DATA ACQUISITION AND PROCESSING.....6

    B.1 EQUIPMENT AND VESSELS.....6

    B.2 QUALITY CONTROL.....6

        Sounding Coverage.....7

        Systematic Errors.....8

    B.3 CORRECTIONS TO ECHO SOUNDINGS.....8

    B.4 DATA PROCESSING.....9

C. HORIZONTAL AND VERTICAL CONTROL.....11

D. RESULTS AND RECOMMENDATIONS.....11

    D.1 CHART COMPARISON.....11

    D.2 ADDITIONAL RESULTS.....12

E. APPROVAL SHEETS.....14

Appendix I     DANGER TO NAVIGATION REPORTS

Appendix II    SURVEY FEATURES REPORT

Appendix III   FINAL PROGRESS SKETCH AND SURVEY OUTLINE

Appendix IV    TIDES AND WATER LEVELS

Appendix V     SUPPLEMENTAL SURVEY RECORDS & CORRESPONDENCE

List of Tables

---

Table 1 Hydrographic Survey Statistics.....4

Table 2 Dates of Acquisition in Calendar and Julian Days.....6

Table 3 TPE Parameters.....9

Table 4 Field sheets.....9

Table 5 Percentage of nodes meeting IHO Order 1 TVU requirements.....10

List of Figures

---

Figure 1 Survey Limits inshore.....5

Figure 2 Survey Limits offshore.....5

Figure 3: 100% Side Scan Coverage .....7

Figure 4: 200% Side Scan Coverage .....7

Figure 5 Final Tide Zoning.....8

Figure 6 Distribution of Uncertainty values .....10

**Descriptive Report to Accompany Hydrographic Survey F00592**

Project OPR-K380-TJ-10  
 Galveston, TX  
 Bolivar Roads  
 Scale 1:10,000  
 19 April – 15 June 2010  
**NOAA Ship *Thomas Jefferson***

**A. AREA SURVEYED**

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-K380-TJ-10, dated 4 April 2010.

Northern Limit	Southern Limit	Western Limit	Eastern Limit
29° 21' 47" N	29° 14' 21.4" N	094° 49' 11.1" W	094° 30' 08.1" W

Data acquisition was conducted from 19 April – 15 June 2010

The purpose of this project is to perform bathymetric developments and address multiple charted features to update the nautical charts within specific areas of interest. This project supports a request from the Galveston Pilots Association to address various charted and un-charted wrecks, obstructions, and other dangers to navigation (including shoaling areas) found within the Bolivar Roads channel entrance. This project will only address specific areas that were identified as areas of concern by the Pilots Association.

	Linear Nautical Miles
LNM Single beam mainscheme only	123
LNM Multibeam mainscheme only	n/a
LNM Lidar mainscheme only	n/a
LNM Side Scan Sonar mainscheme only	7
Lineal nautical miles of any combination of the above techniques (SSS 200%, MBES)	130
LNM Crosslines singlebeam and multibeam combined	23
LNM Lidar Crosslines	n/a
LNM development lines non mainscheme	89.5
LNM shoreline/nearshore investigations	n/a
Number of Bottom Samples	0
Number of items investigated that required additional time/effort in the field beyond the above survey operations	n/a
Total number of square nautical miles	5.9

**Table 1: Hydrographic Survey Statistics**

The survey areas where object detection coverage was met (200% SSS and/or ODMB) are shown below, and are also included in the F00592\_Outline.hob file in Appendix V.

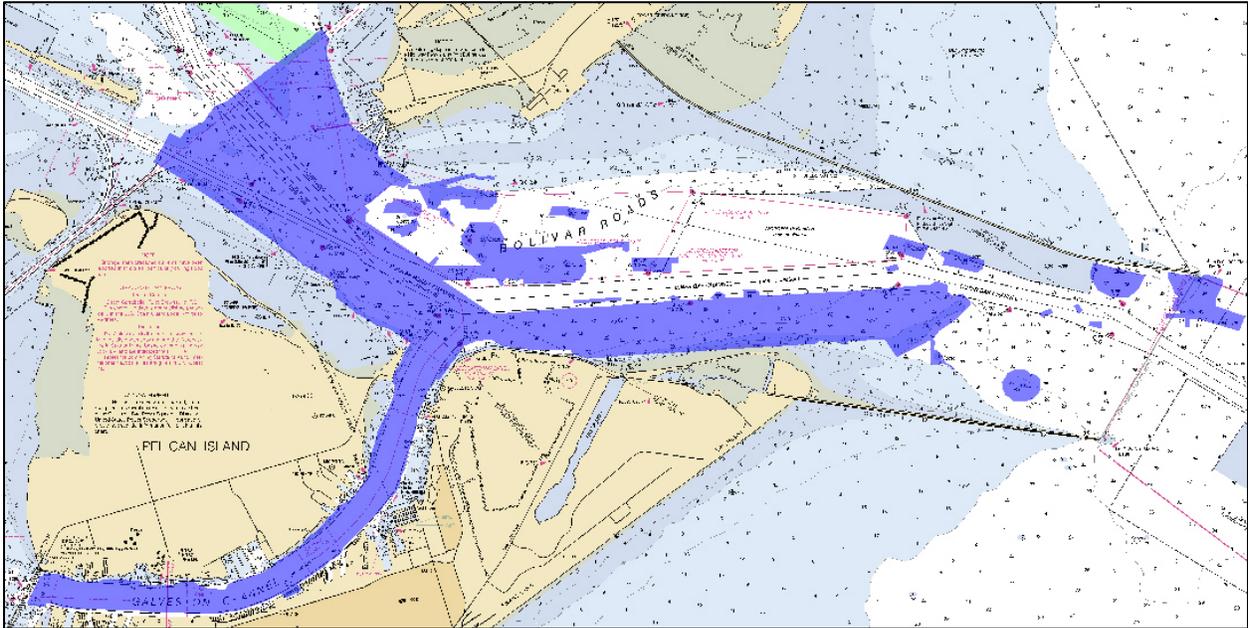


Figure 1: Survey Coverage inshore

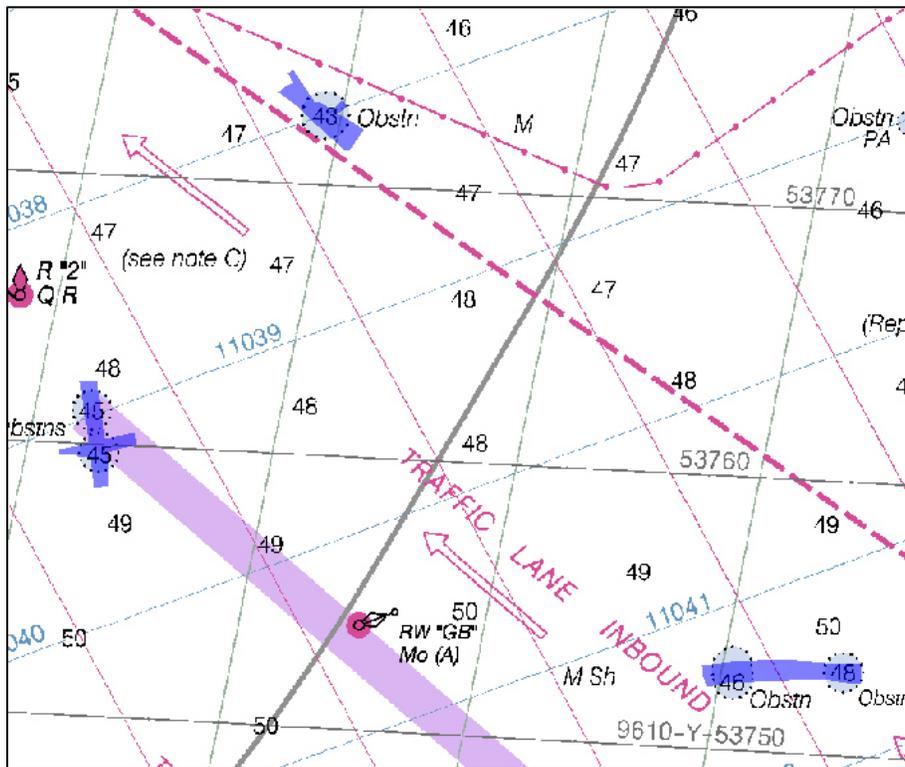


Figure 2: Survey Coverage offshore

<b>Calendar Date</b>	<b>Julian Day</b>
19 April 2010	109*
24 April 2010	114
12 May 2010	132
13 May 2010	133
14 May 2010	134
18 May 2010	138
19 May 2010	139
20 May 2010	140
21 May 2010	141
22 May 2010	142
23 May 2010	143
11 June 2010	162
14 June 2010	165
15 June 2010	166

**Table 2: Dates of Bathymetry Acquisition**

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

Refer to *OPR-K380-TJ-10 Data Acquisition and Processing Report (DAPR)* for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods. Additional information to supplement sounding and survey data, and any deviations from the DAPR are included in this descriptive report.

### **B 1. EQUIPMENT AND VESSELS**

Data were acquired by NOAA Ship *Thomas Jefferson* and Hydrographic Survey Launches 3101 and 3102. NOAA Ship *Thomas Jefferson* acquired Reson 7125 multibeam soundings and sound velocity profiles. Launch 3101 acquired Reson 7125 multibeam soundings, Klein 5000 Side Scan Sonar and sound velocity profiles. Launch 3102 acquired Reson 7125 multibeam soundings, Klein 5000 Side Scan Sonar, and sound velocity profiles. Vessel configurations, equipment operation, and data acquisition and processing were consistent with specifications described in the OPR-K380-TJ-10 DAPR submitted with this survey.

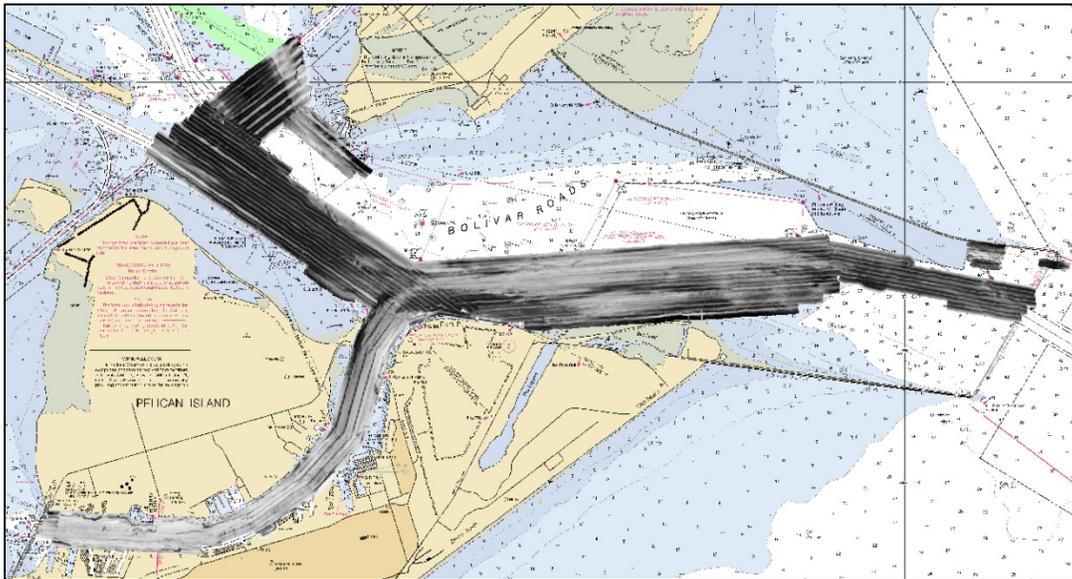
### **B 2. QUALITY CONTROL**

#### **B 2.1 System Certification and Calibration**

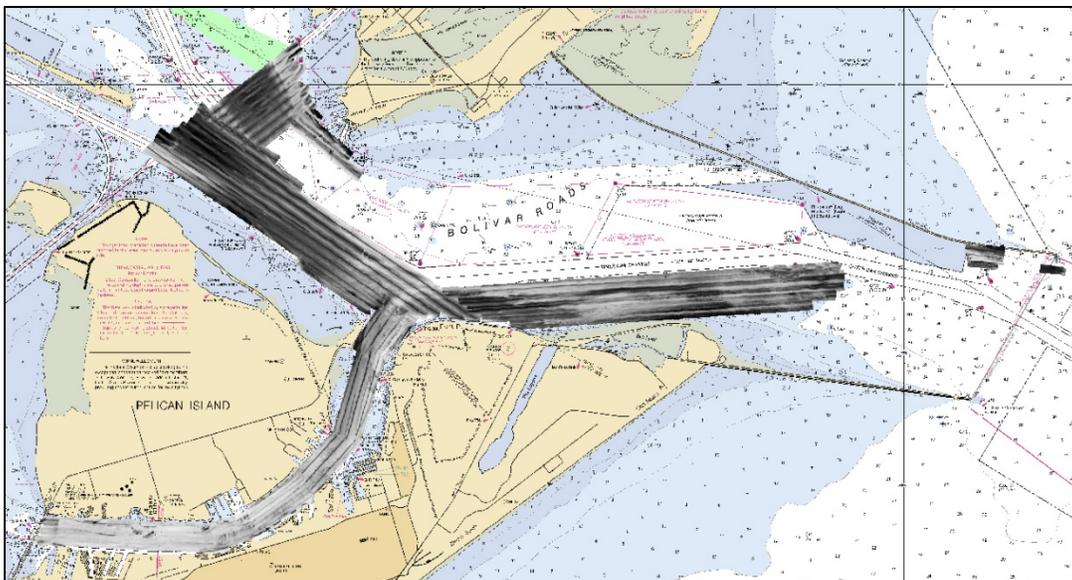
Refer to NOAA Ship *Thomas Jefferson* DAPR for a complete description of system integration and initial calibration results for equipment and sensors used for this survey.

**B.2.2 Sounding Coverage**

As per the Letter Instructions, this survey was conducted using 200% SSS coverage with concurrent Vertical Beam (VB) bathymetry and with object detection MBES development over navigationally significant features. Due to time constraints there were numerous features of significant height in the side scan record which were not developed with multibeam. These features were compiled into an Assigned Feature File (AFF) that has been forwarded to NRT-4 for them to investigate during an upcoming survey in the same area (Appendix V). Full 200% Side scan was not acquired over the entire survey area, with only 100% coverage being acquired in the Inner and Outer Bar Channels (Figures 3 and 4).



**Figure 3: 100% Side Scan Coverage**



**Figure 4: 200% Side Scan Coverage**

**B 2.3 Crosslines**

Cross-lines totaling 23 lineal nautical miles, comprising 18% of hydrography, were acquired during the course of the survey. Areas of unusually high standard deviation were investigated and resolved in processing, except where caused by areas of high bathymetric relief or as described in Section 2.5 Systematic Errors.

**B 2.4 Junctions and Prior Surveys**

There are no relevant junctions or priors for this survey.

**B 2.5 Systematic Errors**

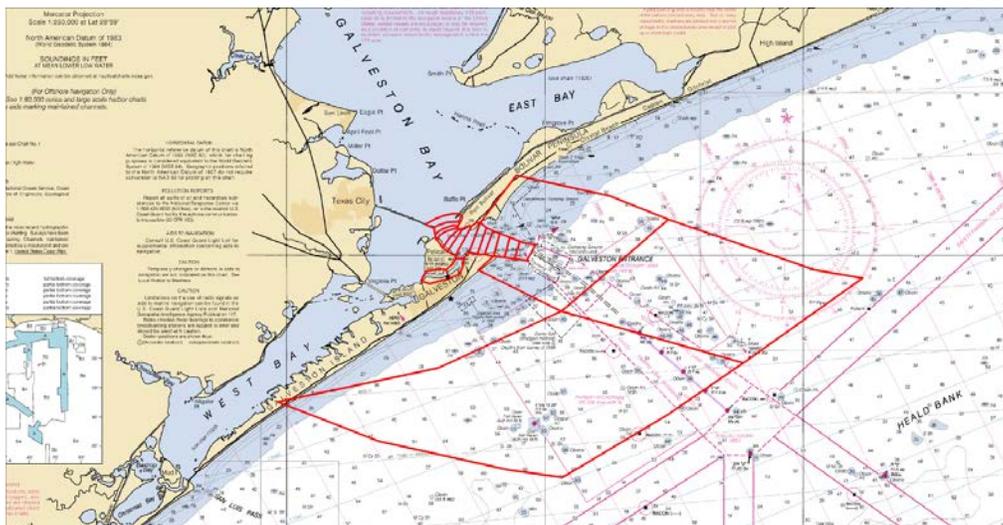
Vertical beam data from Launch 3101 had a varying time offset from the POS navigation data. The offset was evaluated in post processing and an average offset for each day of acquisition was applied to the HDCS using Pydro Post Acquisition Tools. A table detailing offsets for each line and the average for each day is attached in Appendix V of this report.

Multibeam data acquired by Launch 3101 on DN109 shows unresolved time and attitude errors. This data was excluded from the final multibeam grids and HDCS submission.

Areas of high standard deviation exist where Multibeam data were collected over sand waves. As these data were approximately 1 week apart, shifting of the sand waves resulted in changes in bathymetry up to 1 meter in some areas.

**B 3. CORRECTIONS TO ECHO SOUNDING**

HDCS sounding data were reduced to mean lower-low water (MLLW) using verified water levels from Galveston Pleasure Pier, TX (8771510) and Galveston Pier 21, TX (877-1450) and applied using final approved discrete zoning provided by CO-OPS and illustrated in figure 5.



**Figure 5: Final Tide Zoning**

All datum reduction procedures, methods, and instruments used for sound velocity correction conform to those outlined in the DAPR.

**B 4. DATA PROCESSING**

**B 4.1 Total Propagated Error**

For the 2010 field season, Total Propagated Error (TPE) parameters for sound speed and tides are calculated separately for each project (Table 3).

Vessel	Tide Values		Sound Speed Values	
	Measured	Zoning	Measured	Surface
S222	0.00	0.09m	1m/s	0.20m/s
3101	0.00	0.09m	4m/s	0.20m/s
3102	0.00	0.09m	4m/s	0.20m/s

**Table 3: TPE Parameters**

These values were used as inputs to the TPE calculation for all MBES data immediately following CARIS Merge.

**B 4.2 BASE Surfaces and Mosaics**

The following table describes all BASE Surfaces and SS Mosaics submitted as part of Survey F00592:

Name of Surfaces and /or Mosaics	Resolution	Type	Purpose
F00592_VB_Uncert_4m	4 meter	Uncertainty	Sounding Coverage
F00592_MB1_CUBE_NOAA_50cm_Final	50cm	CUBE	Sounding Coverage
F00592_MB2_CUBE_NOAA_50cm_Final	50cm	CUBE	Sounding Coverage
F00592_MB3_CUBE_NOAA_50cm_Final	50cm	CUBE	Sounding Coverage
F00592_MB4_CUBE_NOAA_50cm_Final	50cm	CUBE	Sounding Coverage
F00592_MB5_CUBE_NOAA_50cm_Final	50cm	CUBE	Sounding Coverage
F00592_SSS_100_1m	1 meter	SSS Mosaic	100% Side Scan Coverage
F00592_SSS_200_1m	1 meter	SSS Mosaic	200% Side Scan Coverage

**Table 4: Field Sheets**

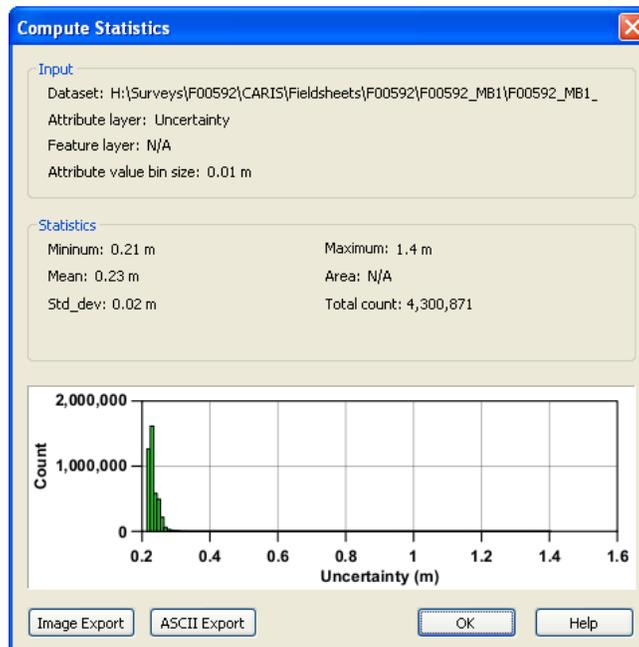
This survey was processed using the Combined Uncertainty and Bathymetry Estimator (CUBE) algorithm. The CUBE configurations were set to NOAA\_0.5m as required for the MB surface resolution. Refer to the 2010 Data Acquisition and Processing Report, 2010 Field Procedures Manual, and CARIS HIPS and SIPS 7.0 manual for further information.

**B 4.3 Data Cleaning**

The survey data were cleaned using the SB Editor, Swath Editor and Subset Editor tools in CARIS. Areas of the BASE surface that indicated a high standard deviation were examined and cleaned as required such that residual errors in the surface do not exceed the IHO order 1 depth uncertainty limits at the 95% confidence interval. Figure 6 illustrates the Total Vertical Uncertainty (TVU) distribution for the surface F00592\_MB1\_Cube\_NOAA\_50cm\_Final.csar. Of the 9,300, 871 nodes in the surface, 1377 nodes exceeded the IHO Order 1 TVU limit. Therefore, 99.97% of the nodes in the surface met IHO Order 1 requirements. Table 5, lists the percentage of nodes meeting IHO Order 1 TVU requirements for F00592 multibeam surfaces. Percentage values have been rounded to 2 decimal places.

Surface Name	Nodes > IHO Order 1	Total Nodes	Percentage Meeting IHO Order 1 TVU
...MB1...Final.csar	1377	4,300,871	99.97%
...MB2...Final.csar	18756	5376748	99.65%
...MB3...Final.csar	3119	3881096	99.92%
...MB4...Final.csar	9809	2264221	99.57%
...MB5...Final.csar	168	2317939	99.9%

**Table 5 – Percentage of nodes meeting IHO Order 1 TVU requirements**



**Figure 6 – Distribution of Uncertainty values in the F00592\_MB1\_Cube\_NOAA\_50cm\_Final grid**

## **C. HORIZONTAL AND VERTICAL CONTROL**

As per FPM section 5.2.3.2.3 a HVCR report was not filed as horizontal and vertical control stations were not established by the field party for this survey. A summary of horizontal and vertical control for this survey follows.

### **C 1.1 Horizontal Control**

The horizontal datum for this project is the North American Datum of 1983 (NAD83). Differential GPS (DGPS) was the sole method of positioning. Differential corrections from U.S. Coast Guard beacons at Angleton, TX (301 kHz), and English Turn, LA (293 kHz), were used during this survey. No horizontal control stations were established by the field party for this survey.

### **C 1.2 Vertical Control**

The vertical datum for this project is Mean Lower-Low Water (MLLW). The operating National Water Level Observation Network (NWLON) station at Galveston Pleasure Pier (8771510) and Galveston Pier 21, TX (877-1450) serve as datum control for F00592. A request for delivery of final approved (verified) tides for this survey was forwarded to N/OPS1 on 21 June 2010 in accordance with the FPM and project letter instructions. Final smooth tide letter dated July 6, 2010, was received by the field unit on 7 July 2010, and states preliminary zoning is accepted as the final zoning.

## **D. RESULTS AND RECOMMENDATIONS**

### **D.1 Chart Comparison**

Survey F00592 was compared to Chart 11324, (36<sup>th</sup> Ed., Jan/09, 1:25,000), Chart 11323, (63<sup>rd</sup> Ed., Nov/09, 1:80,000). Project instructions state that ENC US5TX72M is affected by this survey, however, the limits of that ENC do not coincide with the survey area. No comparison with US5TX72M were possible. ENC USTX53M and ENC USTX52M do coincide with the survey area and have been used for comparisons instead.

#### **D 1.1 Chart 11324/ENC USTX53M Comparison**

Recommend revise contours as per current soundings. All channel depths meet or exceed their tabulated depths where surveyed.

#### **D 1.2 Chart 11323/ENC USTX52M Comparison**

Where surveyed, the soundings agree within 2 feet.

## **D.2 Additional Results**

### **D.2.1 Automated Wreck and Obstruction Information Service (AWOIS) Items**

30 AWOIS items were assigned for this survey. The investigated AWOIS items are described in detail in Appendix II of this report.

### **D.2.4 Shoreline**

Shoreline features were investigated and documented where possible, and are described in Appendix II of this report.

### **D.2.5 Charted Features**

### **D.2.6 Charted Pipelines and Cables**

No pipelines or cables were located in the survey.

### **D.2.7 Bridges, Ferry Routes, and Overhead Cables**

No overhead cables or bridges were located in the surveyed area. There is one ferry route in the survey area, with multiple vessels transiting between Galveston Ferry terminal and Port Bolivar. This Ferry route is uncharted and represents a significant navigational item for the Port as they are a real presence in the area. An approximated ferry route has been included in Appendix II.

### **D 2.8 Platform Structures**

There were two uncharted oil platforms within the survey limits, in the vicinity of 29-18-42.04N, 094-47-57.44W. We were informed by the Pilots association that these platforms are under repair or to be sent to salvage, and are not permanent structures to be charted. These platforms are considered to be temporarily moored adjacent to the Galveston Channel.

## **D.3 Dangers to Navigation**

One danger to navigation was submitted on 6/26/2010. On further investigation it was determined that the feature was not in fact real. It is recommended that the 11ft Obstruction located at 29-20-11.5N, 094-42-38W be removed.

## **D.4 Aids to Navigation**

There are 17 floating Aids to Navigation (ATON) within the limits of F00592. All were noted to be on station and serving their intended purpose.

### **D.5 Coast Pilot Information**

The Coast Pilot sections for this area were reviewed in the context of this survey. The field unit has no particular recommendations.

### **D.6 Miscellaneous**

#### **Bottom Samples**

There was no Bottom Sample requirement for this survey.

#### **Environmental Conditions and Notes**

On rough days, specifically day number 114, some heave or pitch artifacts are present in the data. These artifacts do not impact this survey's ability to meet IHO Order 1 standards.

### **D.7 Adequacy of Survey**

This survey is considered complete and adequate to supersede charted depths and features within the survey area outline except as noted in the recommendation below.

### **Summary and Recommendations for Additional Work**

Additional work is needed to complete this survey. Specific items requiring further investigation were compiled into an Assigned Feature File that was forwarded to NOAA Navigational Response Team 5 (NRT-5). This list is also included in Appendix II. Significant changes to charted areas have been noted and it is recommended that this survey receive priority processing.

**E . APPROVAL**

As Lead Hydrographer, I have ensured that standard field surveying and processing procedures were followed in producing this examination in accordance with the Office of Coast Survey Hydrographic Surveys Division’s *Field Procedures Manual*, and NOS *Hydrographic Surveys Specifications and Deliverables*. Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy.

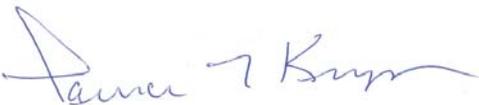
All field sheets, this Descriptive Report, and all accompanying records and data are approved. All records are forwarded for final review and processing to N/CS33, Atlantic Hydrographic Branch.

The Data Acquisition and Processing Report for OPR-K380-TJ-10 is submitted separately and contains additional information relevant to this survey.

Approved and Forwarded:

 Digitally signed by  
Michael C. Davidson  
Date: 2012.04.20  
09:41:11 -04'00'

for  
LT Mark A. Blankenship, NOAA  
Field Operations Officer



for  
CDR Shepard M. Smith, NOAA  
Commanding Officer

In addition, the following individuals were also responsible for overseeing data acquisition and processing of this survey:

Survey Managers:

 Digitally signed by  
Michael C. Davidson  
Date: 2012.04.20  
09:41:36 -04'00'

for  
LT Mark A. Blankenship, NOAA  
Acquisition Manager

 Digitally signed by  
Michael C. Davidson  
Date: 2012.04.20  
09:42:00 -04'00'

for  
CST Daniel Wright, NOAA  
Deliverables Manager

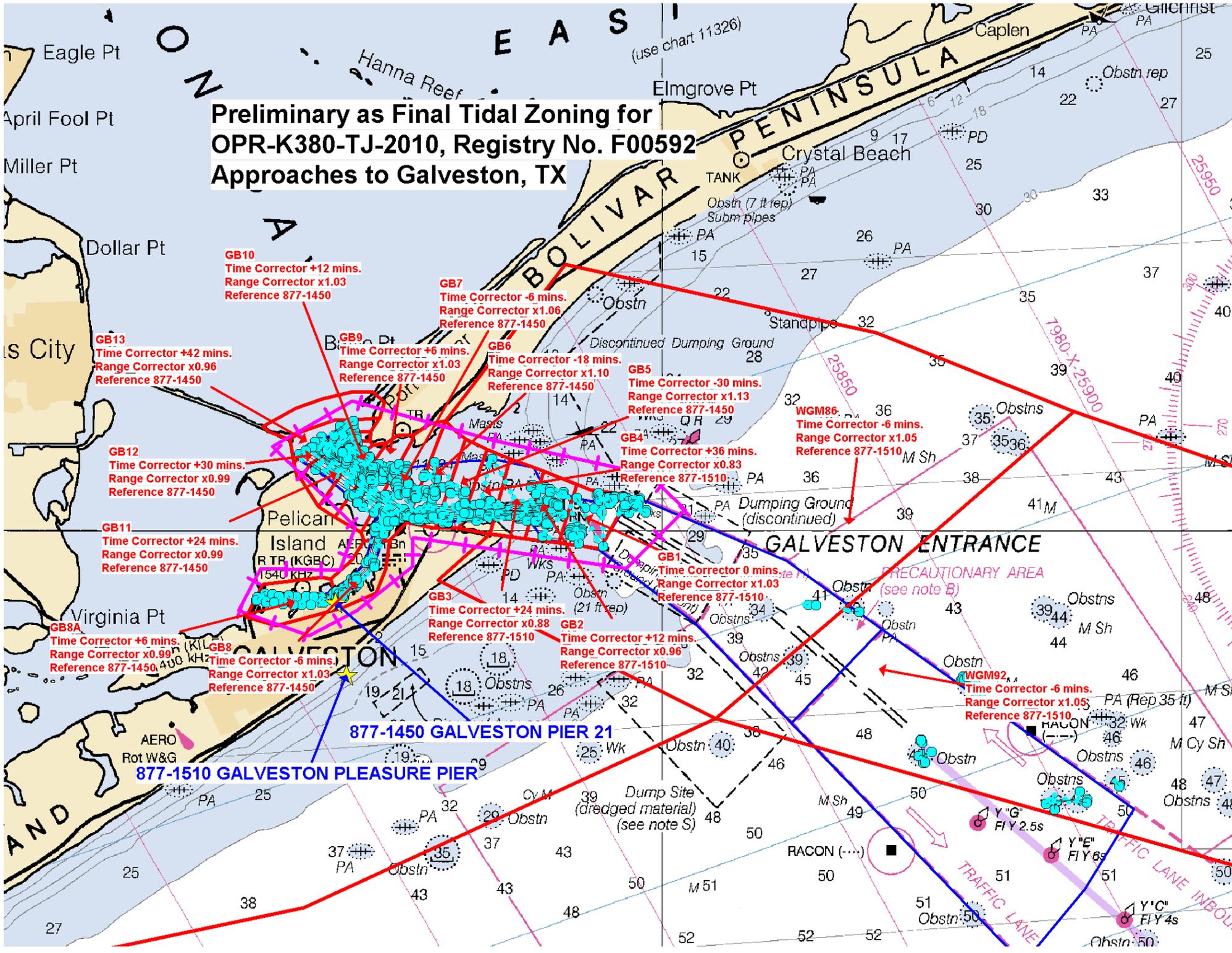
APPENDIX I  
TIDES AND WATER LEVELS



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



**Preliminary as Final Tidal Zoning for  
OPR-K380-TJ-2010, Registry No. F00592  
Approaches to Galveston, TX**



APPENDIX II

SUPPLEMENTAL SURVEY RECORDS  
AND CORRESPONDENCE

**Subject:** [Fwd: Re: [Fwd: [Fwd: Re: [Fwd: [Fwd: Request for zoning & gauge assessment]]]]]  
**From:** CO Thomas Jefferson <CO.Thomas.Jefferson@noaa.gov>  
**Date:** Fri, 16 Apr 2010 16:36:03 -0500  
**To:** daniel wright <Daniel.Wright@noaa.gov>  
**CC:** \_NMAO MOA OPS Thomas Jefferson <OPS.Thomas.Jefferson@noaa.gov>

Galveston FE.

----- Original Message -----

**Subject:**Re: [Fwd: [Fwd: Re: [Fwd: [Fwd: Request for zoning & gauge assessment]]]]  
**Date:**Fri, 16 Apr 2010 17:29:33 -0400  
**From:**james.m.crocker <[James.M.Crocker@noaa.gov](mailto:James.M.Crocker@noaa.gov)>  
**To:**CO Thomas Jefferson <[CO.Thomas.Jefferson@noaa.gov](mailto:CO.Thomas.Jefferson@noaa.gov)>  
**CC:**\_NMAO MOA OPS Thomas Jefferson <[OPS.Thomas.Jefferson@noaa.gov](mailto:OPS.Thomas.Jefferson@noaa.gov)>  
**References:**<[4BC8A106.5010400@noaa.gov](mailto:4BC8A106.5010400@noaa.gov)>

Here is the Survey registry information. I will have project instruction worked up next week. Enjoy the weekend in port.

Success - Survey Added  
Survey Number F00592  
Project Number OPR-K380-TJ-10  
Survey Type F  
Locality Galveston Bay Entrance  
Sub Locality Bolivar Roads  
State Texas,  
Scale 10,000  
Sheet 1

Regards,  
Jim

CO Thomas Jefferson wrote:

> Jim,  
>  
> Here are some preliminary bounds based on our initial discussion with  
> the pilots this AM. It may change when we get the full markup from  
> the Houston Pilots.  
>  
> Shep  
>  
> ----- Original Message -----  
> Subject: [Fwd: Re: [Fwd: [Fwd: Request for zoning & gauge assessment]]]  
> Date: Fri, 16 Apr 2010 13:15:55 -0400  
> From: james.m.crocker <[James.M.Crocker@noaa.gov](mailto:James.M.Crocker@noaa.gov)>  
> To: \_NMAO MOA CO Thomas Jefferson <[CO.Thomas.Jefferson@noaa.gov](mailto:CO.Thomas.Jefferson@noaa.gov)>  
>  
>  
> Shep,  
>  
> Please send me the bounds for the FE for the approach to Galveston.  
> Since I don't see how an additional gauge would be required, provided  
> the requirements do not go further inside that Bolivar Roads, I think  
> you can start ahead of a response from CO-OPS. You may end up sitting  
> on the data for a bit but I will do what I can to get you the zoning  
> sooner than later. See below to get an idea of how things are going  
> with CO-OPS.  
>

> Jim  
>  
>

--  
CDR Shepard Smith, NOAA  
Commanding Officer  
NOAA Ship Thomas Jefferson  
439 West York St  
Norfolk, VA 23510  
757-647-0187

Shepard Smith <[shep.smith@noaa.gov](mailto:shep.smith@noaa.gov)>

From ["james.m.crocker" <James.M.Crocker@noaa.gov>](mailto:James.M.Crocker@noaa.gov)  
Sent Monday, April 19, 2010 1:36 pm  
To [Rachel Soraruf <Rachel.Soraruf@noaa.gov>](mailto:Rachel.Soraruf@noaa.gov)  
Cc [Kyle Ward <Kyle.Ward@noaa.gov>](mailto:Kyle.Ward@noaa.gov) , [\\_NMAO MOA OPS Thomas Jefferson <OPS.Thomas.Jefferson@noaa.gov>](mailto:_NMAO.MOA.OPS.Thomas.Jefferson@noaa.gov)  
Bcc  
Subject [Fwd: Re: [Fwd: [Fwd: Re: [Fwd: [Fwd: Request for zoning & gauge assessment]]]]]

Rachel,

Here is the project that I need you to create instructions for. Please get with Mark Blankenship for the specifics as the project will only address charted wrecks, obstructions, and areas of concern identified by the Pilots and will not be a complete survey of the bounding area Shep sent. Please review and revise survey tracker if I made any errors when creating this project and survey.

I will submit the tide assessment and zoning support request for this project.

Kyle is on the ship now and can inform you if a CSF is necessary and if so what is required. All features assigned will be treated as AWOIS items with search radius to allow for disproval and removal of the item from the chart if it no longer exists. Most of the features should be from a contemporary survey with good positioning thus search radius should be fairly small.

Let me know if you have any questions.

Jim

----- Original Message -----

Subject: Re: [Fwd: Re: [Fwd: [Fwd: Request for zoning & gauge assessment]]]

Date: Fri, 16 Apr 2010 17:29:33 -0400

From: james.m.crocker <james.m.crocker@noaa.gov>

To: CO Thomas Jefferson <CO.Thomas.Jefferson@noaa.gov>

CC: \_NMAO MOA OPS Thomas Jefferson <OPS.Thomas.Jefferson@noaa.gov>

References: <4BC8A106.5010400@noaa.gov>

Here is the Survey registry information. I will have project instruction worked up next week. Enjoy the weekend in port.

Success - Survey Added  
Survey Number F00592  
Project Number OPR-K380-TJ-10  
Survey Type F  
Locality Galveston Bay Entrance  
Sub Locality Bolivar Roads  
State Texas,  
Scale 10,000  
Sheet 1

Regards,  
Jim

From	<a href="mailto:David.Wolcott@noaa.gov">David Wolcott &lt;David.Wolcott@noaa.gov&gt;</a>		
Sent	Wednesday, July 7, 2010 9:19 pm		
To	<a href="mailto:Norris.A.Wike@noaa.gov">Norris A Wike &lt;Norris.A.Wike@noaa.gov&gt;</a> , <a href="#">_OMAO MOA OPS Thomas Jefferson &lt;OPS.Thomas.Jefferson@noaa.gov&gt;</a>		
Cc	<a href="mailto:Kyle.Ward@noaa.gov">Kyle Ward &lt;Kyle.Ward@noaa.gov&gt;</a> , <a href="#">"_NOS.CO-OPS.HTP" &lt;NOS.COOPS.HPT@noaa.gov&gt;</a>		
Bcc			
Subject	Final Tide for OPR-K380-TJ-2010, Registry No. F00592		
Attachments	<a href="#">image/png</a>	39K	<a href="#">F00592.pdf</a> 288K

DATE: 07/07/2010

MEMORANDUM FOR: LCDR Rick Brennan  
Chief, Atlantic  
Hydrographic Branch

FROM: Gerald Hovis  
Oceanographic Division, N/OPS1

SUBJECT: Delivery of Tide Requirements for  
Hydrographic Surveys

This is notification that the preliminary zoning is accepted as the final zoning for survey project OPR-K380-TJ-2010, registry No. F00592 during the time period between April 19 - June 15, 2010. The accepted reference stations for registry No. F00592 are Galveston Pier 21, TX (8771450) and Galveston Pleasure Pier, TX (8771510.)

Included with this memo is a Tide Note in .PDF format, stating the preliminary zoning has been accepted as the final zoning.

--

David Wolcott  
Hydrographic Planning Team  
NOS/CO-OPS  
p: (310) 713-2890 x 153



## UNITED STATES DEPARTMENT COMMERCE

National Oceanic and Atmospheric Administration  
Office of Marine and Aviation Operations  
NOAA Ship *Thomas Jefferson* S-222  
439 West York Street  
Norfolk, VA 23510-1114

September 26, 2010

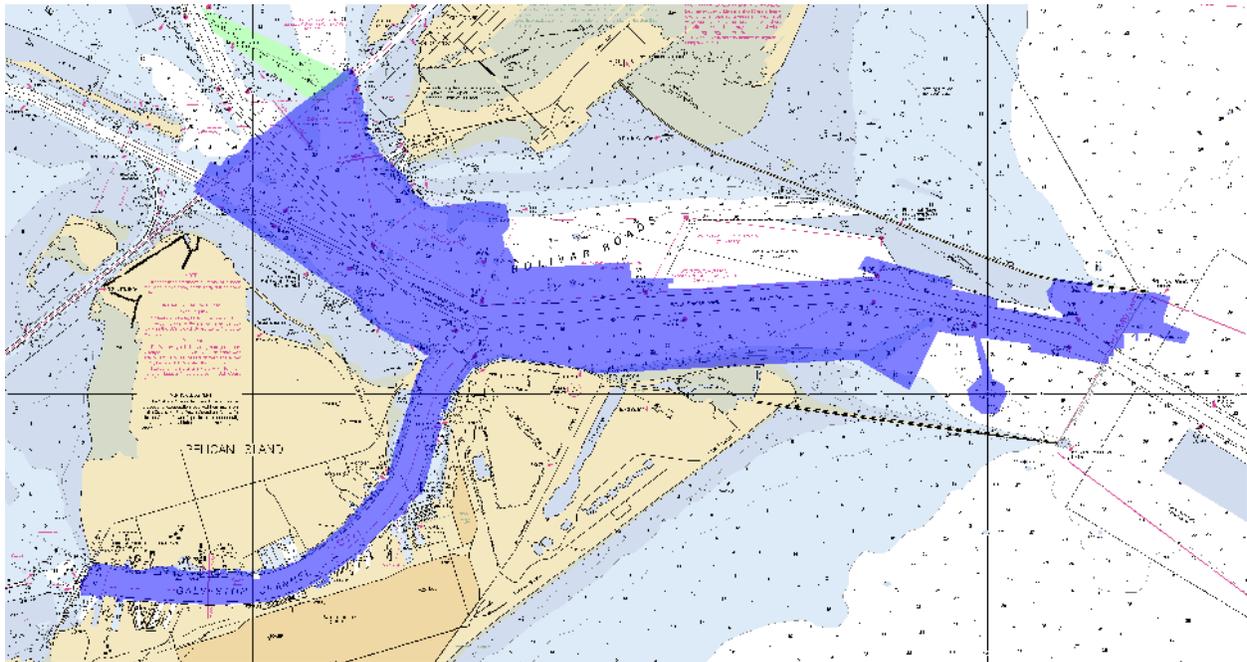
Memorandum For: Galveston Texas Navigation Interests

From: CDR Shepard M. Smith, NOAA  
Commanding Officer, NOAA Ship *Thomas Jefferson*

Subject: Preliminary Survey Results, F00592

The NOAA Ship *Thomas Jefferson* has completed survey F00592, Northern Gulf of Mexico, 35 NM Southeast of Sabine, TX, and has conducted a preliminary analysis of the results. This survey will be further analyzed ashore, and depths, features and properties of those features may change significantly before the final chart is issued. These preliminary products should not be relied upon for navigation.

This survey is shown in the diagram below.



Survey F00592

The following page contains a sounding plot in chart units overlaid on the current NOAA chart.

In addition, the soundings are attached as an S-57 (ENC format) file and .hob (CARIS EZ View) file. The NOAA Navigation manager for this area can help with interpretation and some additional data processing as necessary.

The *Thomas Jefferson* will complete processing, analysis, and documentation of this survey and send it ashore for review and application to the chart on or about October 1, 2010. It will be available for charting within 2-4 months thereafter, and will be on the next edition chart. If the findings are deemed to be particularly significant, parts of the survey may be issued as Notices to Mariners, and a new edition of the chart may be issued ahead of the regular print cycle.

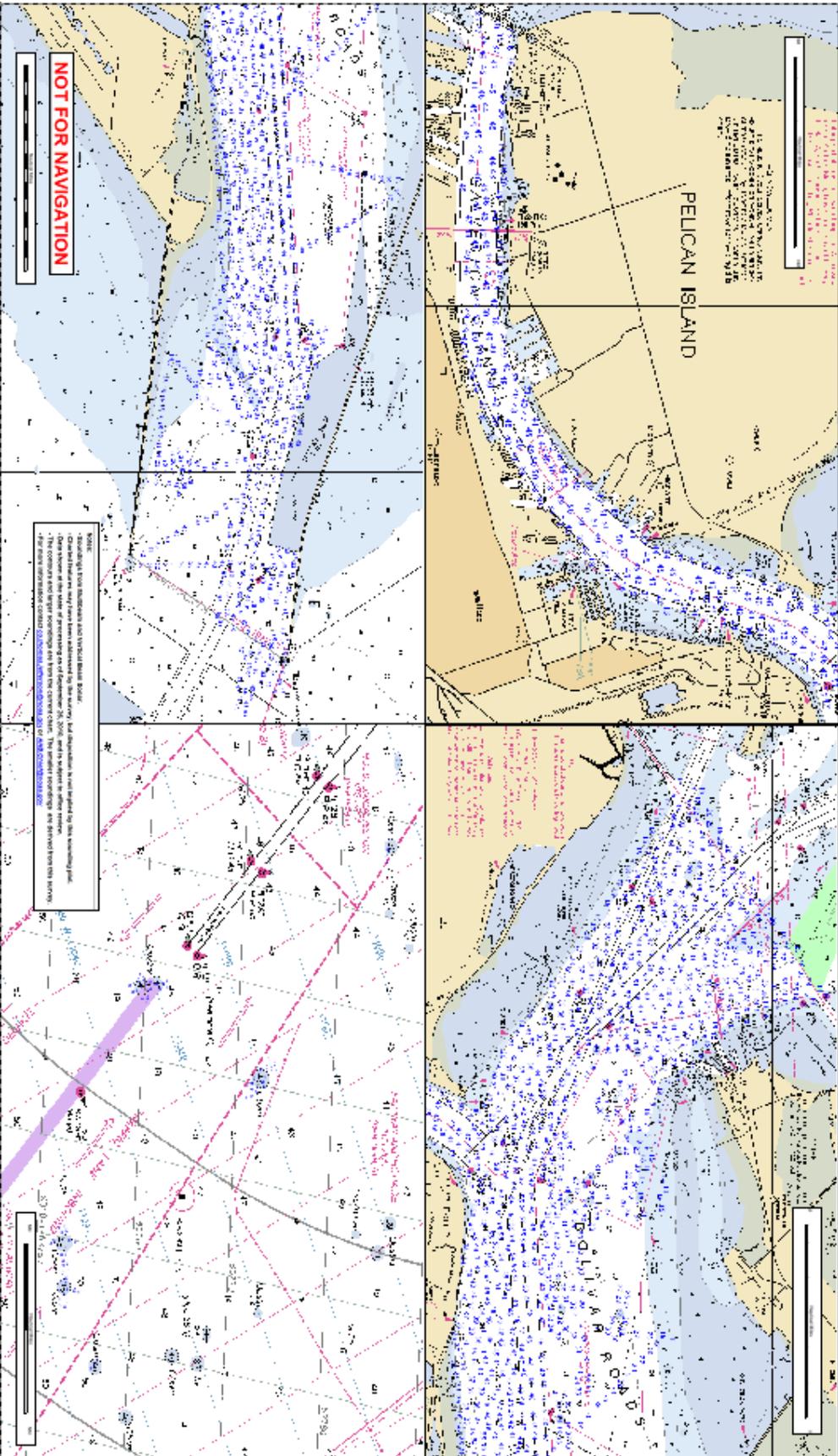
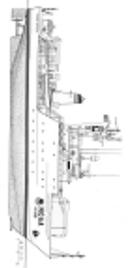


National Oceanic and Atmospheric Administration  
Office of Coast Survey

NOAA Ship Thomas Jefferson  
CDR Shepard M. Smith,  
Commanding  
Survey Dates:  
April 19 - June 11, 2010

Survey: F00392  
State: Texas  
Locality: Galveston, TX  
Sub-Locality: Bolivar Roads  
Survey Scale: 1:10,000

Soundings: Feet  
Sounding Datum: MLLW  
Horizontal Datum: NAD 83  
Chart Number: 11324  
Chart Edition: 2009-02





**UNITED STATES DEPARTMENT COMMERCE**

National Oceanic and Atmospheric Administration  
Office of Marine and Aviation Operations  
NOAA Ship *Thomas Jefferson* S-222  
439 West York Street  
Norfolk, VA 23510-1114

September 22, 2010

Memorandum For:                   Nautical Data Branch

From:                                CDR Shepard M. Smith, NOAA  
  Commanding Officer, NOAA Ship *Thomas Jefferson*

Subject:                             Coast Pilot Report, F00592

The relevant Coast Pilot sections for this survey have been reviewed, and no additions or corrections have been noted.

## APPENDIX III

### FEATURE REPORT

(No Maritime Boundaries or Wrecks)

# F00592\_AWOIS Items

**Registry Number: F00592**

**State: Texas**

**Locality: Galveston**

**Sub-locality: Bolivar Roads**

**Project Number: OPR-K380-TJ-10**

**Survey Dates: April 19, 2010 to June 15, 2010**

## Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11324	36th	01/01/2009	1:25,000 (11324_2) 1:25,000 (11324_1)	[L]NTM: ?
11322	32nd	11/01/2008	1:40,000 (11322_1)	[L]NTM: ?
11331	21st	01/01/2009	1:40,000 (11331_4)	[L]NTM: ?
11323	62nd	12/01/2006	1:80,000 (11323_1)	[L]NTM: ?
11326	36th	09/01/2008	1:80,000 (11326_6)	[L]NTM: ?
11330	19th	08/01/2008	1:250,000 (11330_1)	[L]NTM: ?
11340	73rd	08/01/2008	1:458,596 (11340_1)	[L]NTM: ?
1116A	73rd	08/01/2008	1:458,596 (1116A_1)	[L]NTM: ?
1117A	42nd	03/01/2008	1:460,732 (1117A_1)	[L]NTM: ?
11300	42nd	03/01/2008	1:460,732 (11300_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	AWOIS #13658 - Charted dangerous obstruction least depth 43 foot	Obstruction	13.52 m	29° 20' 59.7" N	094° 46' 53.1" W	13658
1.2	AWOIS #14777 - Charted dangerous obstruction, least depth 36 feet	Obstruction	10.95 m	29° 21' 13.7" N	094° 46' 52.1" W	14777
1.3	AWOIS #14778 - Charted dangerous obstruction, PA, depth unknown	GP	[None]	29° 21' 06.0" N	094° 46' 35.6" W	14778
1.4	AWOIS #14353 - Charted dangerous 13 foot obstruction	Obstruction	3.93 m	29° 21' 14.7" N	094° 46' 02.2" W	14353
1.5	AWOIS 13432 - Charted dangerous obstruction PA, least depth 23 feet	GP	[None]	29° 20' 57.2" N	094° 46' 00.7" W	13432
1.6	AWOIS #13430 - Charted dangerous obstruction, PA, least depth unknown	Obstruction	8.53 m	29° 20' 46.7" N	094° 45' 38.4" W	13430

1.7	AWOIS #13656 - Charted dangerous 28 foot obstruction	Obstruction	8.04 m	29° 21' 07.5" N	094° 45' 22.0" W	13656
1.8	AWOIS #13657 - Charted dangerous 35 foot obstruction	Obstruction	10.34 m	29° 20' 46.9" N	094° 44' 45.3" W	13657
1.9	AWOIS #13350 - Charted dangerous 45 foot obstruction.	Obstruction	14.04 m	29° 20' 54.7" N	094° 42' 51.3" W	13350
1.10	AWOIS #14355 - Charted 44 ft dangerous obstruction	Obstruction	13.61 m	29° 20' 48.9" N	094° 42' 25.9" W	14355
1.11	AWOIS #13427 - Retain charted wreck PA	Wreck	[None]	29° 20' 00.1" N	094° 42' 00.0" W	13427
1.12	AWOIS #13426 - Charted visible wreck PA	Wreck	[None]	29° 20' 44.0" N	094° 41' 17.0" W	13426
1.13	AWOIS #9018 - Charted 22 foot dangerous wreck	Wreck	5.76 m	29° 20' 29.1" N	094° 40' 45.5" W	9018
1.14	AWOIS #9022 - Retain charted 15 foot dangerous sunken wreck.	Wreck	4.50 m	29° 20' 42.6" N	094° 40' 42.3" W	9022
1.15	AWOIS #13425 - Charted dangerous wreck, PA, depth unknown	Wreck	19.17 m	29° 20' 41.9" N	094° 40' 35.7" W	13425
1.16	AWOIS #14779 - Charted partially covered wreck PA	Wreck	[None]	29° 20' 24.0" N	094° 40' 30.0" W	14779
1.17	AWOIS #11099 - Charted 45 foot dangerous obstruction	Obstruction	14.03 m	29° 15' 27.9" N	094° 33' 55.7" W	11099
1.18	AWOIS #11096 - Charted 48 foot dangerous obstruction	Obstruction	14.49 m	29° 14' 31.5" N	094° 30' 22.4" W	11096
1.19	AWOIS #11085 - Charted 46 foot dangerous obstruction	Obstruction	14.00 m	29° 14' 39.0" N	094° 30' 54.7" W	11085

## 1.1) AWOIS #13658 - Charted dangerous obstruction least depth 43 foot

### Primary Feature for AWOIS Item #13658

**Search Position:** 29° 20' 59.7" N, 094° 46' 53.2" W  
**Historical Depth:** 13.29 m  
**Search Radius:** 100  
**Search Technique:** MB, ES, S2  
**Technique Notes:** Item investigation MB, SSS

#### History Notes:

S-K614-WH-02 (HLS) -- 200% SSS and 100% SWMB were acquired over item in position:029° 20' 59.732" N, 94° 46' 53.198" W (NAD 83) with a least depth of 13.29 m. Hydrographer recommends charting an obstruction and present survey soundings. Updated 7/26/2006 JCM.

### Survey Summary

**Survey Position:** 29° 20' 59.7" N, 094° 46' 53.1" W  
**Least Depth:** 13.52 m (= 44.37 ft = 7.394 fm = 7 fm 2.37 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2010-166.00:00:00.000 (06/15/2010)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000596675 00001(022600091AC30001)  
**Charts Affected:** 11324\_1, 11324\_2, 11322\_1, 11331\_4, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

OBSTRN/remrks: Obstruction found with MB.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000596675 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 13658	1.88	130.1	Secondary (grouped)

## Hydrographer Recommendations

Revise charted obstruction.

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

44ft (11324\_1, 11324\_2, 11322\_1, 11331\_4, 11323\_1, 11326\_6, 11330\_1)

7 ¼fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:** NINFOM - Add obstruction

QUASOU - 6:least depth known

SORDAT - 20100615

SORIND - US,US,graph,F00592

TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 13.523 m

WATLEV - 3:always under water/submerged

## Office Notes

AHB SAR: Charted AWOIS feature located at survey position with 200% SSS and ODMB.

COMPILATION: Delete charted 43 foot dangerous obstruction. Add dangerous obstruction least depth 44 feet in present survey location.

### Feature Images

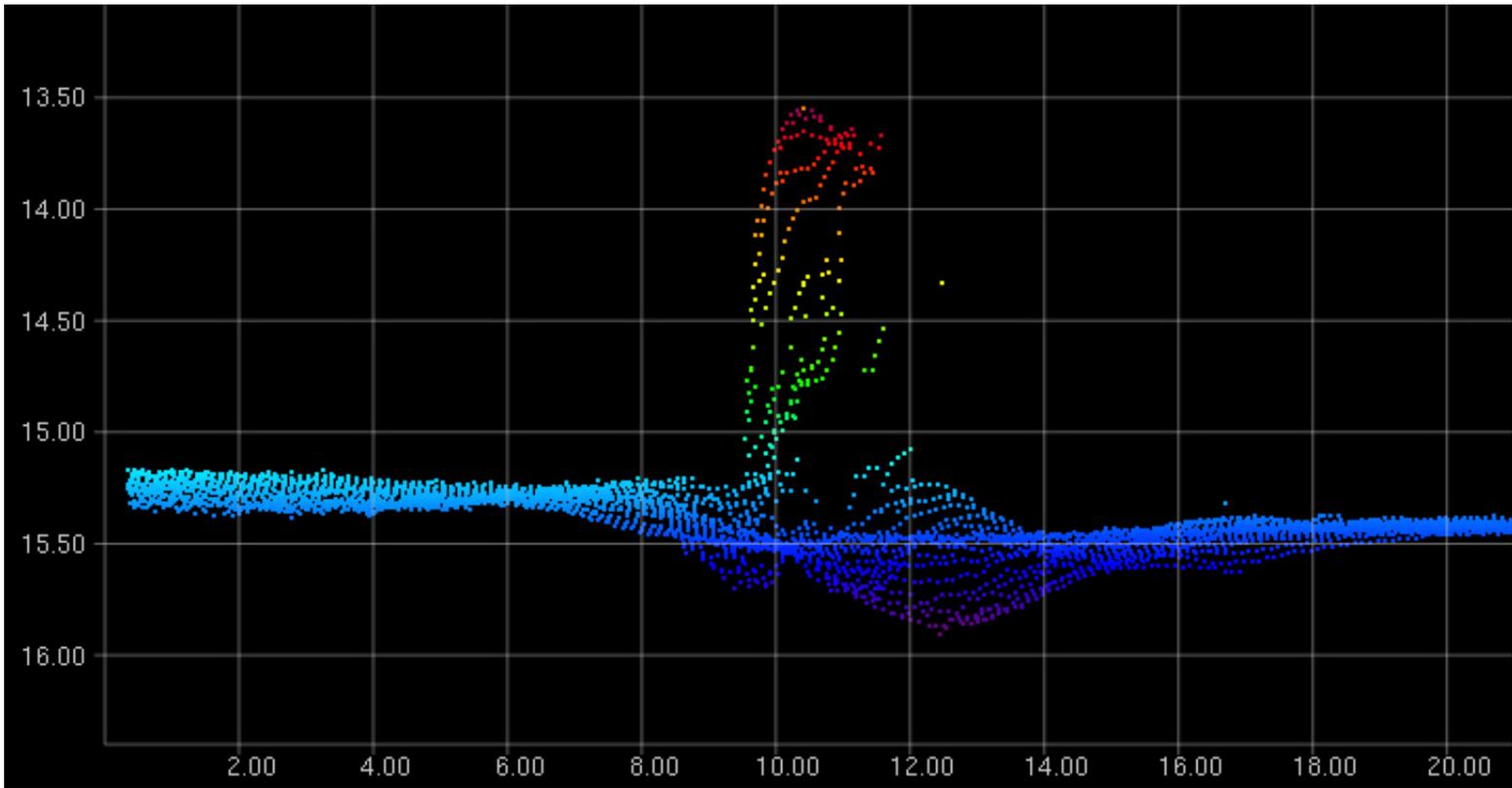


Figure 1.1.1

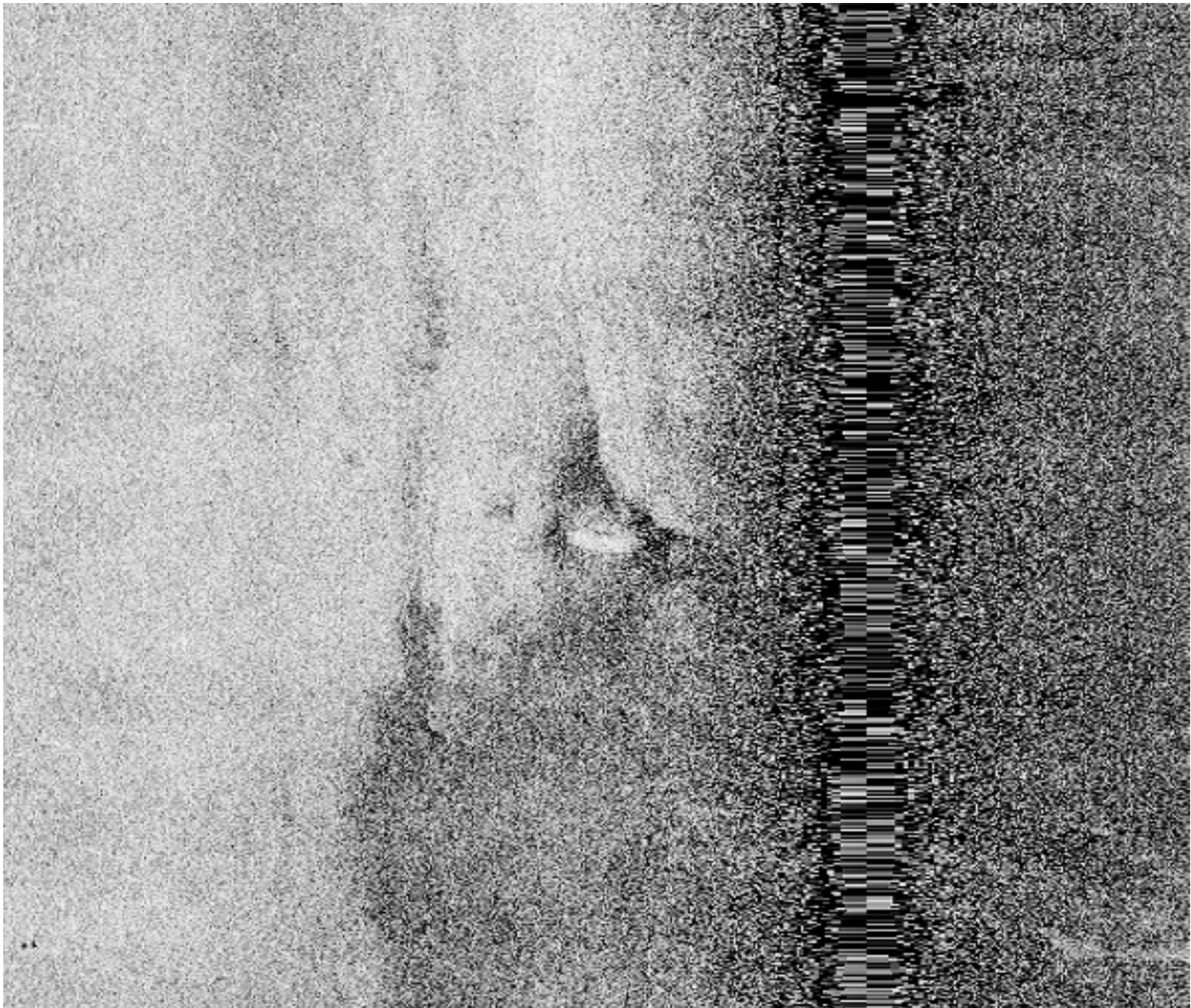


Figure 1.1.2

## 1.2) AWOIS #14777 - Charted dangerous obstruction, least depth 36 feet

### Primary Feature for AWOIS Item #14777

**Search Position:** 29° 21' 13.5" N, 094° 46' 52.2" W  
**Historical Depth:** 11.00 m  
**Search Radius:** 100  
**Search Technique:** MB, S2, ES  
**Technique Notes:** Item investigation, MB, SSS

#### History Notes:

H11528(2006)--This unknown contact was seen on both 100% and 200% SSS records within the search radius of AWOIS item 13424 (which was disproved during this survey) and is located approximately 95m SE of the currently charted shoal. SB investigation was conducted in a star pattern and the contact was seen on the echosounder trace. Echosounder data was corrected to MLLW using observed verified tides with preliminary zoning. The least depth obtained on the contact is shoaler than the surrounding depth. It is not thought that this contact is the charted shoal. A charted 36ft obstruction was added to chart 11324 as a result. Entered by RES on 4/23/10.

### Survey Summary

**Survey Position:** 29° 21' 13.7" N, 094° 46' 52.1" W  
**Least Depth:** 10.95 m (= 35.93 ft = 5.989 fm = 5 fm 5.93 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2010-166.00:00:00.000 (06/15/2010)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000596686 00001(022600091ACE0001)  
**Charts Affected:** 11324\_1, 11324\_2, 11322\_1, 11331\_4, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

OBSTRN/remrks: AWOIS 14777 found with MB.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000596686 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 14777	5.45	027.1	Secondary (grouped)

## Hydrographer Recommendations

Revise charted obstruction.

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

36ft (11324\_1, 11324\_2, 11322\_1, 11331\_4, 11323\_1, 11326\_6, 11330\_1)

6fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** NINFOM - Add obstruction  
QUASOU - 6:least depth known  
SORDAT - 20100615  
SORIND - US,US,graph,F00592  
TECSOU - 3:found by multi-beam  
VALSOU - 10.952 m  
WATLEV - 3:always under water/submerged

## Office Notes

AHB SAR: Charted AWOIS feature located at survey position with ODMB.

COMPILATION: Delete charted 36 foot dangerous obstruction. Add dangerous obstruction, least depth 36 feet in present survey location.

### Feature Images

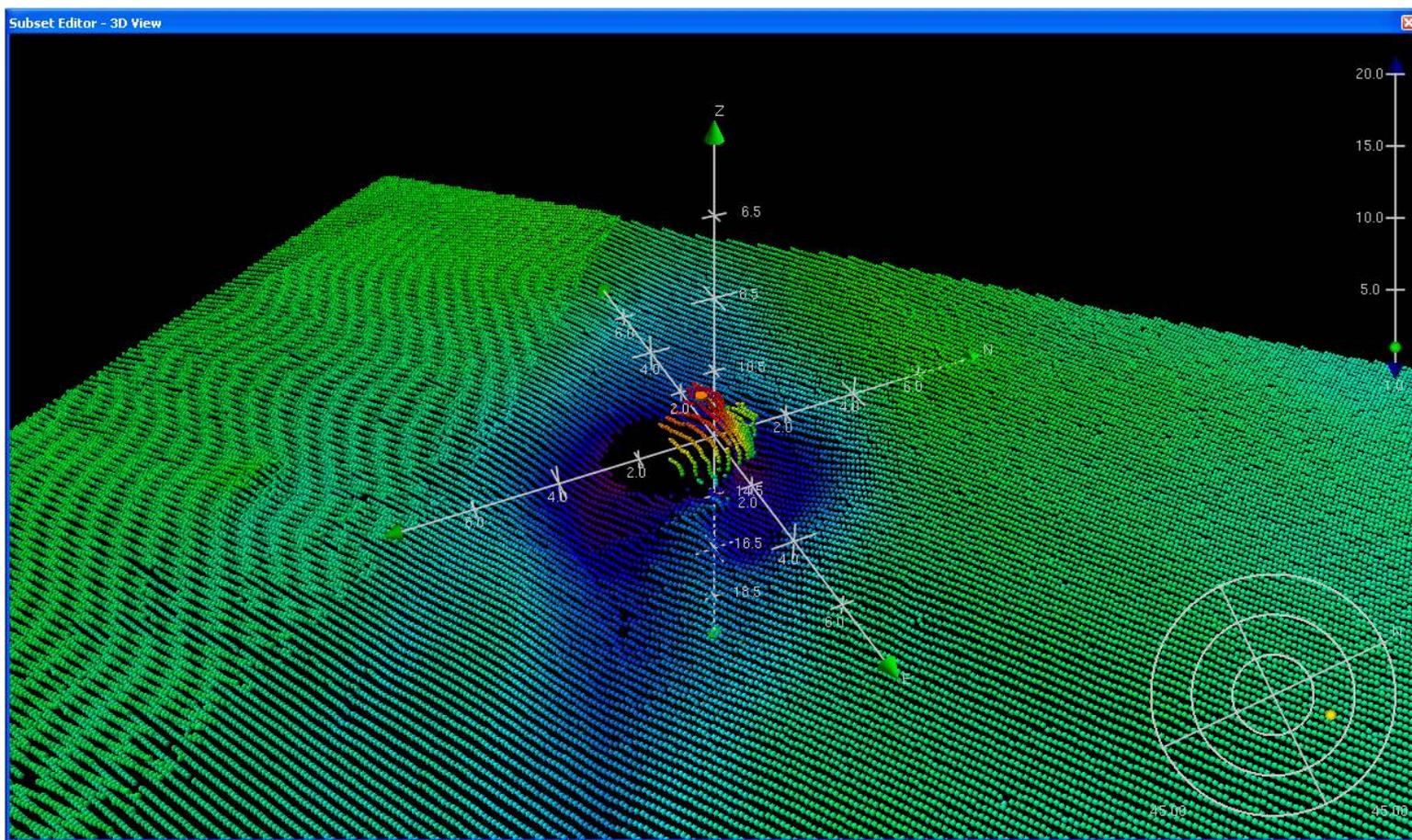


Figure 1.2.1

### 1.3) AWOIS #14778 - Charted dangerous obstruction, PA, depth unknown

#### Primary Feature for AWOIS Item #14778

**Search Position:** 29° 21' 06.0" N, 094° 46' 36.0" W  
**Historical Depth:** [None]  
**Search Radius:** 200  
**Search Technique:** MB, S2, ES  
**Technique Notes:** Item investigation, MB, SSS

#### History Notes:

LNM 18/08(30 April 2008)--"Submerged Obstruction (PA)" (Anchor Chain) (CGD8 069-08)at position: 29-21-06.000N 094-46-36.000W. Entered by RES on 4/23/10.

#### Survey Summary

**Survey Position:** 29° 21' 06.0" N, 094° 46' 35.6" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 1981-001.00:00:00.000 (01/01/1981)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000596626 00001(022600091A920001)  
**Charts Affected:** 11324\_1, 11324\_2, 11322\_1, 11331\_4, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

\$CSYMB/remrks: Anchor and chain matching AWOIS description found with MB.

#### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000596626 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 14778	10.57	095.6	Secondary

#### Hydrographer Recommendations

Revise AWOIS obstruction.

## S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

**Attributes:** NINFOM - Delete Obstruction

NTXTDS - Chart 11324,ED 37,20120901

## Office Notes

AHB SAR: Charted AWOIS feature located at survey position with ODMB.

COMPILATION: Concur with conditions. Delete charted dangerous obstruction, depth unknown, PA. Do not chart 33 foot obstruction. Surrounding depths 34-37 feet. Chart 33 foot depth.

### Feature Images

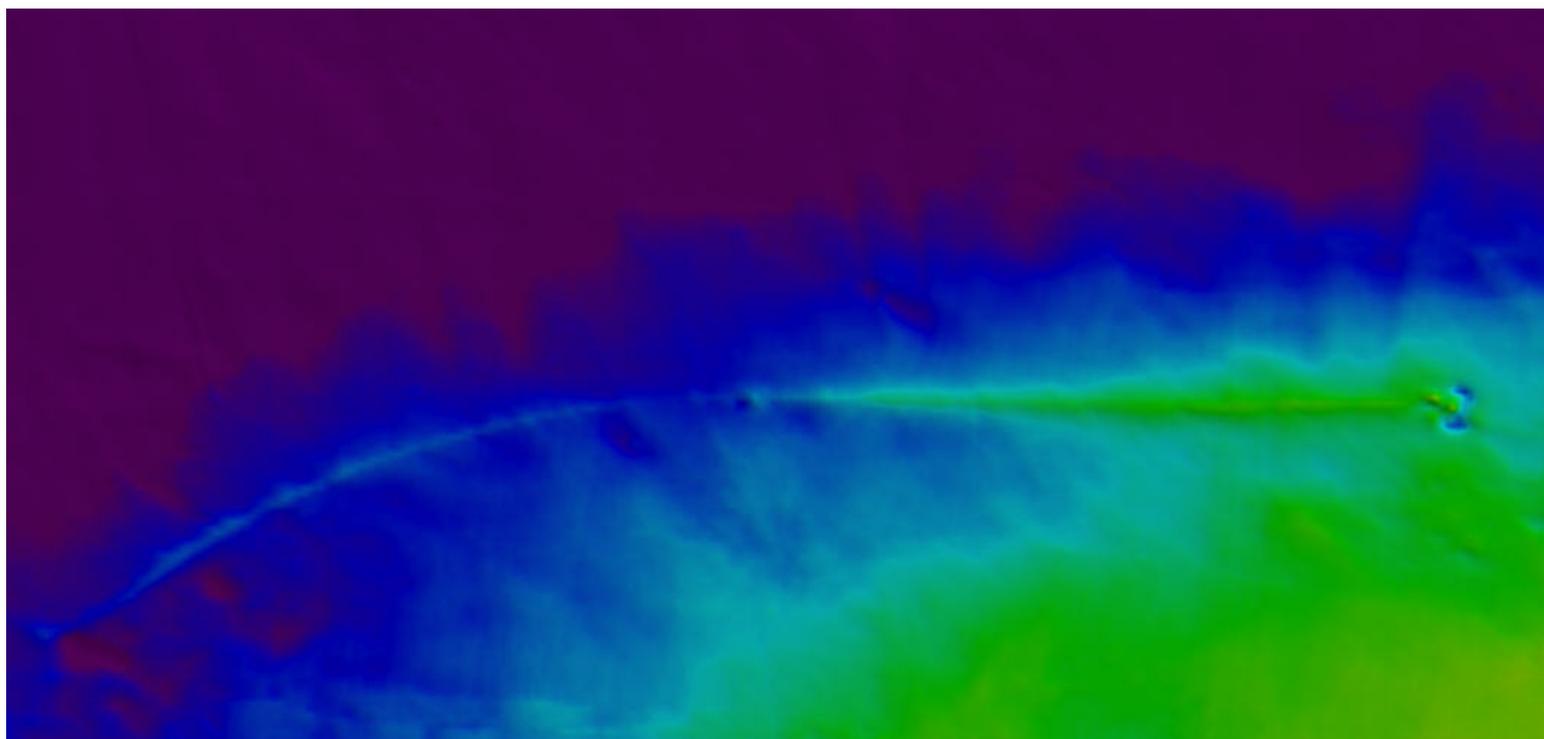


Figure 1.3.1

## 1.4) AWOIS #14353 - Charted dangerous 13 foot obstruction

### Primary Feature for AWOIS Item #14353

**Search Position:** 29° 21' 14.7" N, 094° 46' 02.1" W  
**Historical Depth:** 3.96 m  
**Search Radius:** 100  
**Search Technique:** MB, ES, S2  
**Technique Notes:** Item investigation MB, SSS

#### History Notes:

H11528/06-- OPR-K414-NRT4-06; Obstruction found during 200% SSS survey. Least depth of 13 found. Recommended chart a 13ft Obstn. (Updated CEH 10/2008)

### Survey Summary

**Survey Position:** 29° 21' 14.7" N, 094° 46' 02.2" W  
**Least Depth:** 3.93 m (= 12.88 ft = 2.147 fm = 2 fm 0.88 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2010-166.00:00:00.000 (06/15/2010)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000596602 00001(022600091A7A0001)  
**Charts Affected:** 11324\_1, 11324\_2, 11322\_1, 11331\_4, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

OBSTRN/remrks: Charted AWOIS obstruction found with MB.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000596602 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 14353	2.69	262.4	Secondary (grouped)

### Hydrographer Recommendations

Revise charted AWOIS obstruction.

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

13ft (11324\_1, 11324\_2, 11322\_1, 11331\_4, 11323\_1, 11326\_6, 11330\_1)  
2fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** NINFOM - Add obstruction  
QUASOU - 6:least depth known  
SORDAT - 20100615  
SORIND - US,US,graph,F00592  
TECSOU - 3:found by multi-beam  
VALSOU - 3.927 m  
WATLEV - 3:always under water/submerged

## Office Notes

AHB SAR: Charted AWOIS feature located at survey position with ODMB.

COMPILATION: Concur. Delete charted 13 foot dangerous obstruction. Add dangerous 13 foot obstruction in present survey location.

### Feature Images

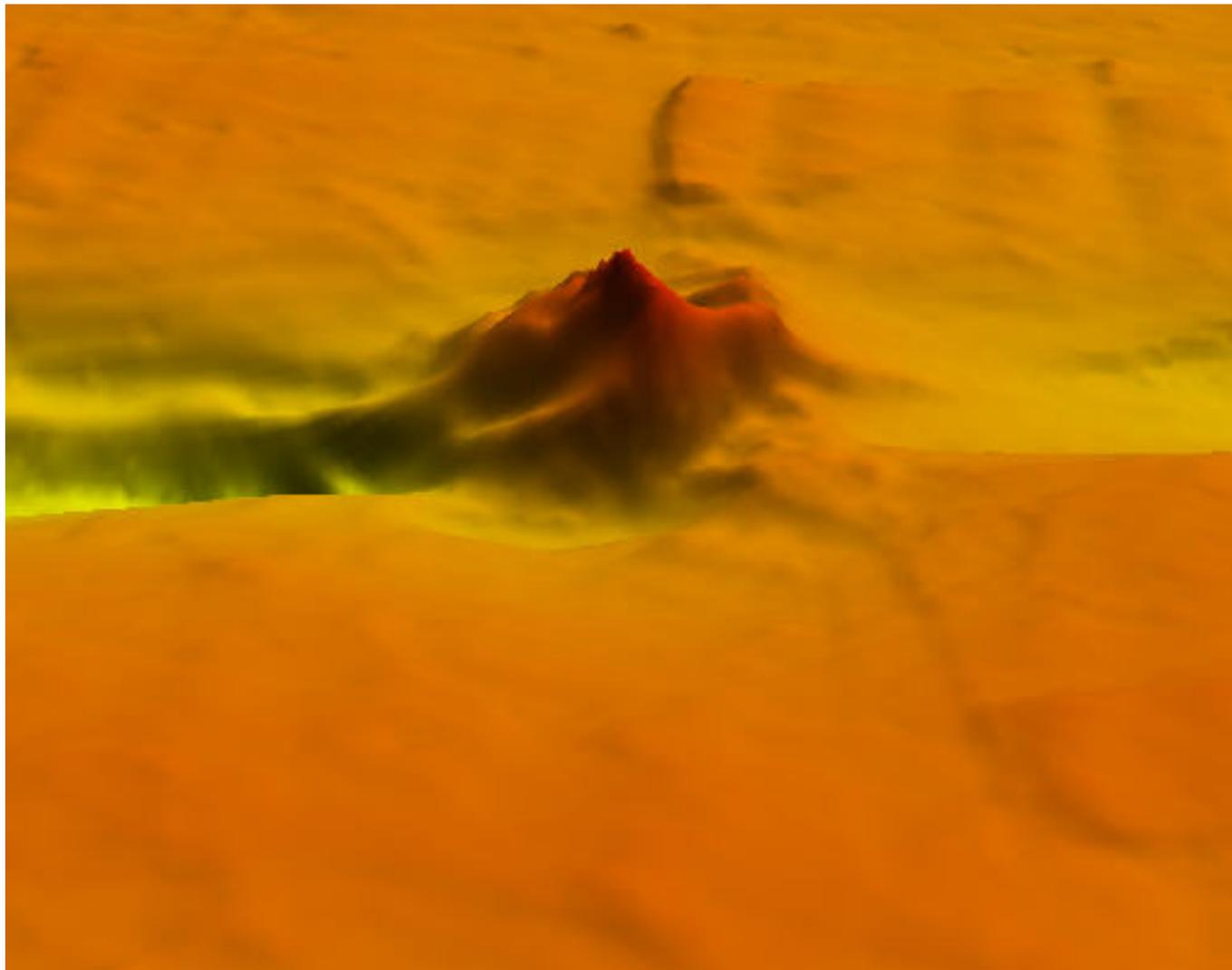


Figure 1.4.1

## 1.5) AWOIS 13432 - Charted dangerous obstruction PA, least depth 23 feet

### Primary Feature for AWOIS Item #13432

**Search Position:** 29° 20' 57.2" N, 094° 46' 00.7" W  
**Historical Depth:** [None]  
**Search Radius:** 100  
**Search Technique:** S2, ES, MB  
**Technique Notes:** Item investigation MB, SSS

#### History Notes:

LNM 36/04-- AN OIL PRODUCTION PLATFORM SUNK AND CHARTED AS SUBMERGED OBSTRUCTION WITH POSITION APPROXIMATE AT 29/21/00.0 - 94/46/00.0. (ENTERED CEH 12/05)

H11528/06-- OPR-K414-NRT4-06; A contact was found at 29/21/57.159 - 94/46/00.720. 90 meters south of current charted Subm Obsn PA. It was recommended to move current charted Obsn PA to the surveyed contact location and chart 23 rep Obsn PA. (Updated CEH 10/2008)

### Survey Summary

**Survey Position:** 29° 20' 57.2" N, 094° 46' 00.7" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 1981-001.00:00:00.000 (01/01/1981)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000596770 00001(022600091B220001)  
**Charts Affected:** 11324\_1, 11324\_2, 11322\_1, 11331\_4, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

\$CSYMB/remrks: AWOIS search radius surveyed with 200% SS and OD MB. Obstruction was not found.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000596770 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 13432	0.00	000.0	Secondary (grouped)

## Hydrographer Recommendations

Remove charted obstruction.

### S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)  
**Attributes:** NINFOM - Delete obstruction  
NTXTDS - Chart 11324,ED 37,20120901

### Office Notes

AHB SAR: Survey coverage meets AWOIS search radius requirement. Charte AWOIS feature disproved with ODMB.

COMPILATION: Concur. Delete charted dangerous obstruction PA, least depth 23 feet

## 1.6) AWOIS #13430 - Charted dangerous obstruction, PA, least depth unknown

### Primary Feature for AWOIS Item #13430

**Search Position:** 29° 20' 46.4" N, 094° 45' 34.6" W  
**Historical Depth:** [None]  
**Search Radius:** 200  
**Search Technique:** S2,ES,MB  
**Technique Notes:** Item investigation MB, SSS

#### History Notes:

LNM 01/99-- AN ANCHOR AND CHAIN CHARTED AS SUBMERGED OBSTRUCTION AT 29/20/50.0 - 94/45/31.0. (ENTERED CEH 12/05)

H11528/06-- OPR-K414-NRT4-06; Contact was found at 29/20/46.373 - 94/45/34.561, 148 SE of the current charted Subm Obstrn PA. Recommended to move the current charted Obstrn to survey position . (Updated CEH 10/2008)

### Survey Summary

**Survey Position:** 29° 20' 46.7" N, 094° 45' 38.4" W  
**Least Depth:** 8.53 m (= 27.98 ft = 4.663 fm = 4 fm 3.98 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2010-166.00:00:00.000 (06/15/2010)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000596734 00001(022600091AFE0001)  
**Charts Affected:** 11324\_1, 11324\_2, 11322\_1, 11331\_4, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

OBSTRN/remrks: 1.1m high obstruction found approximately 100m west of charted Obstrn PA. Feature presumed to be AWOIS #13430.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000596734 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 13430	104.43	276.1	Secondary (grouped)

## Hydrographer Recommendations

Revise Obstruction PA.

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

28ft (11324\_1, 11324\_2, 11322\_1, 11331\_4, 11323\_1, 11326\_6, 11330\_1)

4 ½fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** NINFOM - Add obstruction  
QUASOU - 6:least depth known  
SORDAT - 20100615  
SORIND - US,US,graph,F00592  
TECSOU - 3:found by multi-beam  
VALSOU - 8.528 m  
WATLEV - 3:always under water/submerged

### Office Notes

AHB SAR: Charted AWOIS feature located at survey position with ODMB.

COMPILATION: Concur with conditions. Delete charted dangerous obstruction PA, least depth unknown. Add 28 foot depth in present survey location.

### Feature Images

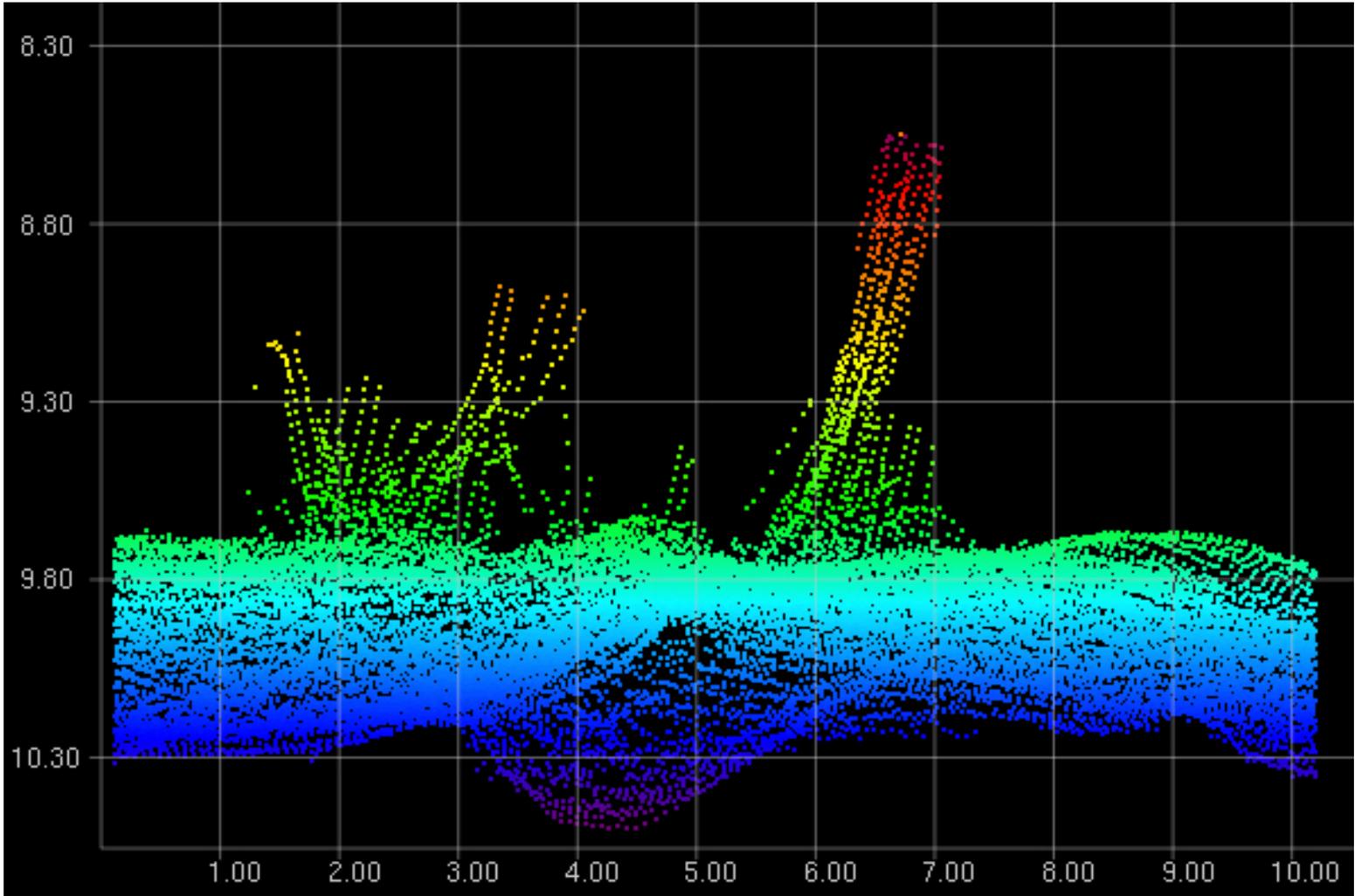


Figure 1.6.1

## 1.7) AWOIS #13656 - Charted dangerous 28 foot obstruction

### Primary Feature for AWOIS Item #13656

**Search Position:** 29° 21' 07.5" N, 094° 45' 21.9" W  
**Historical Depth:** 8.06 m  
**Search Radius:** 300  
**Search Technique:** [None]  
**Technique Notes:** Item investigation, MB, SSS

#### History Notes:

S-K614-WH-02 (HLS) -- Item with least depth of 8.06 m found in position: 029° 21' 07.472" N, 94° 45' 21.938" W (NAD 83).  
Updated 7/26/2006 JCM

### Survey Summary

**Survey Position:** 29° 21' 07.5" N, 094° 45' 22.0" W  
**Least Depth:** 8.04 m (= 26.36 ft = 4.394 fm = 4 fm 2.36 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2010-166.00:00:00.000 (06/15/2010)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000596727 00001(022600091AF70001)  
**Charts Affected:** 11324\_1, 11324\_2, 11331\_4, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

OBSTRN/remrks: AWOIS item found with MB.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000596727 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 13656	1.32	249.7	Secondary (grouped)

### Hydrographer Recommendations

Revise obstn.

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

26ft (11324\_1, 11324\_2, 11331\_4, 11323\_1, 11326\_6, 11330\_1)

4 ¼fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:** NINFOM - Add obstruction

QUASOU - 6:least depth known

SORDAT - 20100615

SORIND - US,US,graph,F00592

TECSOU - 3:found by multi-beam

VALSOU - 8.035 m

WATLEV - 3:always under water/submerged

## Office Notes

AHB SAR: Charted AWOIS feature located at survey position with ODMB.

COMPILATION: Concur with conditions. Delete charted 28 foot dangerous obstruction. Add 26 foot depth in present survey location.

### Feature Images

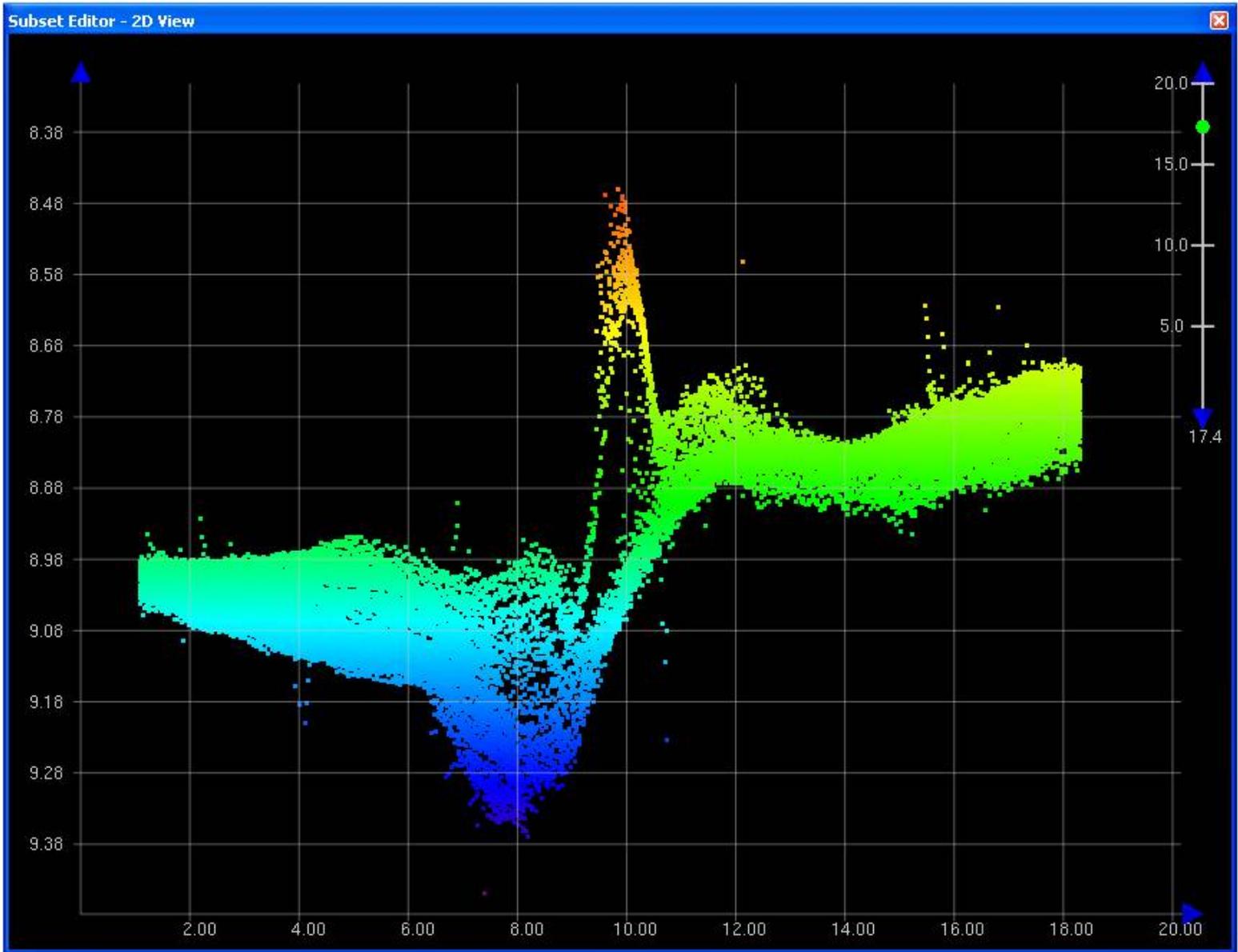


Figure 1.7.1

## 1.8) AWOIS #13657 - Charted dangerous 35 foot obstruction

### Primary Feature for AWOIS Item #13657

**Search Position:** 29° 20' 46.9" N, 094° 44' 45.3" W  
**Historical Depth:** 10.37 m  
**Search Radius:** 300  
**Search Technique:** MB, S2, ES  
**Technique Notes:** Item Investigation MB, SSS

#### History Notes:

S-K614-WH-02 (HLS) -- 200% SSS and 100% SWMB were acquired over an item with a least depth of 10.37 m in position: 029° 20' 46.917" N, 94° 44' 45.263" W (NAD 83). Updated 7/26/2006 JCM.

### Survey Summary

**Survey Position:** 29° 20' 46.9" N, 094° 44' 45.3" W  
**Least Depth:** 10.34 m (= 33.91 ft = 5.651 fm = 5 fm 3.91 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2010-166.00:00:00.000 (06/15/2010)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000596723 00001(022600091AF30001)  
**Charts Affected:** 11324\_1, 11324\_2, 11331\_4, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

OBSTRN/remrks: AWOIS obstruction found with MB.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000596723 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 13657	0.71	004.7	Secondary (grouped)

### Hydrographer Recommendations

Revise charted AWOIS obstruction.

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

34ft (11324\_1, 11324\_2, 11331\_4, 11323\_1, 11326\_6, 11330\_1)

5 ½fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

## S-57 Data

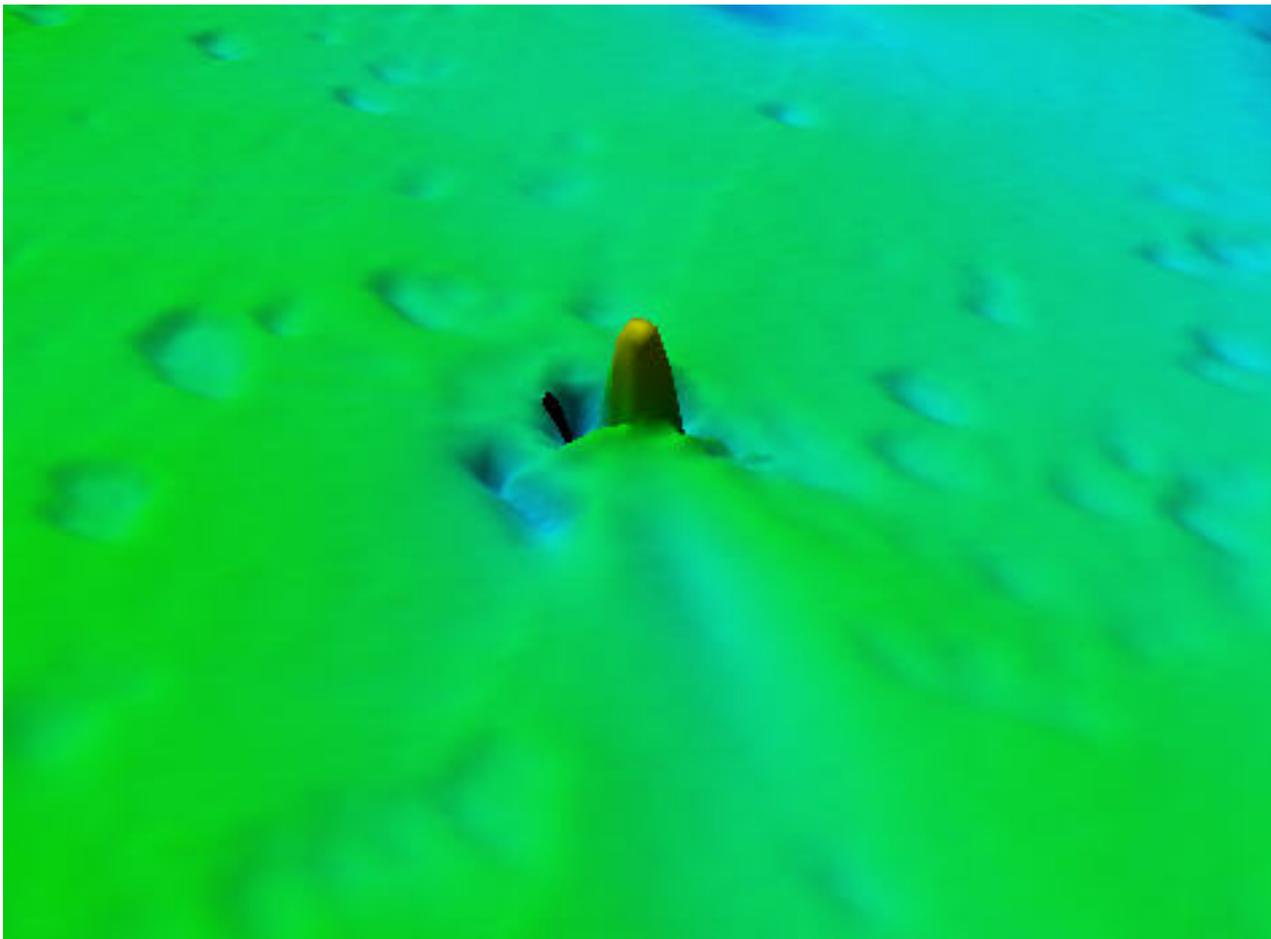
**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** NINFOM - Add obstruction  
QUASOU - 6:least depth known  
SORDAT - 20100615  
SORIND - US,US,graph,F00592  
TECSOU - 3:found by multi-beam  
VALSOU - 10.335 m  
WATLEV - 3:always under water/submerged

## Office Notes

AHB SAR: Charted AWOIS feature located at survey position with ODMB.

COMPILATION: Concur with conditions. Delete charted 35 foot dangerous obstruction. Do not chart 34 foot depth, more conspicuous 34 foot depth directly to east closer to channel.

### Feature Images



*Figure 1.8.1*

## 1.9) AWOIS #13350 - Charted dangerous 45 foot obstruction.

### Primary Feature for AWOIS Item #13350

**Search Position:** 29° 20' 54.7" N, 094° 42' 51.3" W  
**Historical Depth:** 13.11 m  
**Search Radius:** 100  
**Search Technique:** MB,S2,ES  
**Technique Notes:** Item Investigation, MB, SSS

#### History Notes:

CL1797/02--10/28/02, 8TH CGD; DANGER TO NAVIGATION (DTON) FROM S-K14-WH-02. OBSTRUCTION 43-FT IN POSITION 29 20 54.70 N, 094 42 51.29 W (NAD 83). UPDATED 9/22/2005 JCM.

H11528/06-- OPR-K414-NRT4-06; Contact was found on SSS. Recommended to retain as charted. (Updated CEH 10/2008)

### Survey Summary

**Survey Position:** 29° 20' 54.7" N, 094° 42' 51.3" W  
**Least Depth:** 14.04 m (= 46.06 ft = 7.676 fm = 7 fm 4.06 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2010-166.00:00:00.000 (06/15/2010)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000582791 00001(02260008E4870001)  
**Charts Affected:** 11324\_1, 11324\_2, 11331\_4, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

OBSTRN/remrks: Obstruction found with MB.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000582791 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 13350	1.82	219.1	Secondary (grouped)

## Hydrographer Recommendations

Revise Obstruction.

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

46ft (11324\_1, 11324\_2, 11331\_4, 11323\_1, 11326\_6, 11330\_1)

7 ½fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

## S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** NINFOM - Add Obstruction  
QUASOU - 6:least depth known  
SORDAT - 20100615  
SORIND - US,US,graph,F00592  
TECSOU - 3:found by multi-beam  
VALSOU - 14.038 m  
WATLEV - 3:always under water/submerged

## Office Notes

AHB SAR: Charted AWOIS feature located at survey position with ODMB.

COMPILATION: Concur. Delete charted 45 foot dangerous obstruction. Add dangerous 46 foot obstruction in present survey location.

### Feature Images

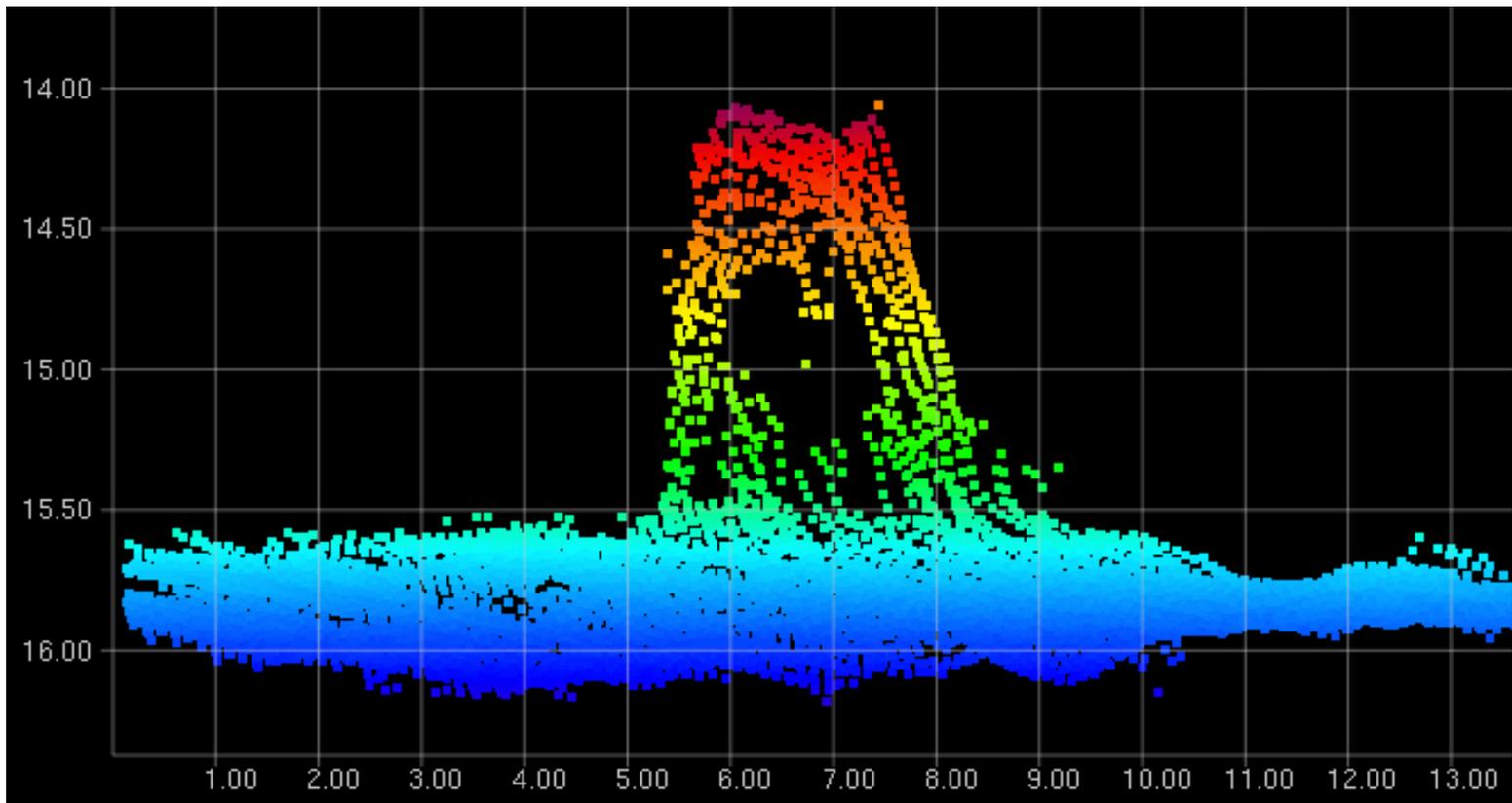


Figure 1.9.1

## 1.10) AWOIS #14355 - Charted 44 ft dangerous obstruction

### Primary Feature for AWOIS Item #14355

**Search Position:** 29° 20' 48.9" N, 094° 42' 26.0" W  
**Historical Depth:** 13.41 m  
**Search Radius:** 200  
**Search Technique:** MB, S2, ES  
**Technique Notes:** Item Investigation, MB, SSS

#### History Notes:

H11528/06-- OPR-K414-NRT4-06; Obstruction found during SSS survey. Least depth of 44 ft was obtained. Recommended charting 44 ft Obstrn. (Updated CEH 10/2008)

### Survey Summary

**Survey Position:** 29° 20' 48.9" N, 094° 42' 25.9" W  
**Least Depth:** 13.61 m (= 44.64 ft = 7.440 fm = 7 fm 2.64 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2010-166.00:00:00.000 (06/15/2010)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000596633 00001(022600091A990001)  
**Charts Affected:** 11324\_1, 11324\_2, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

OBSTRN/remrks: AWOIS obstruction found with Multibeam.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000596633 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 14355	3.27	094.5	Secondary (grouped)

### Hydrographer Recommendations

Revise charted AWOIS obstruction.

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

44ft (11324\_1, 11324\_2, 11323\_1, 11326\_6, 11330\_1)

7 ½fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** NINFOM - Add Obstruction  
QUASOU - 6:least depth known  
SORDAT - 20100615  
SORIND - US,US,graph,F00592  
TECSOU - 3:found by multi-beam  
VALSOU - 13.606 m  
WATLEV - 3:always under water/submerged

### Office Notes

AHB SAR: Charted AWOIS feature located at survey position with ODMB.

COMPILATION: Concur. Delete charted 44 foot dangerous obstruction. Add dangerous obstruction, least depth 44 feet in present survey location.

### Feature Images

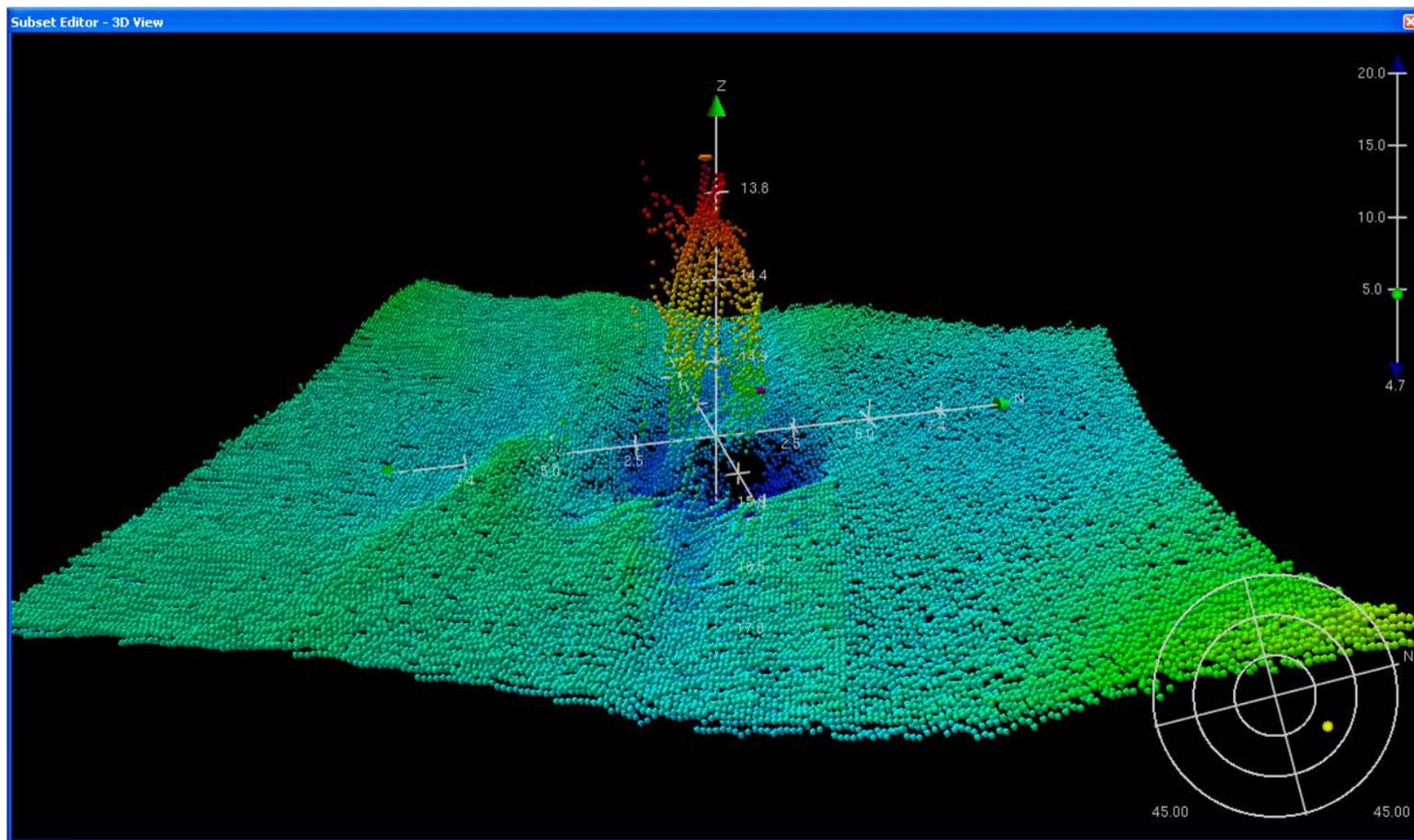


Figure 1.10.1

## 1.11) AWOIS #13427 - Retain charted wreck PA

### Primary Feature for AWOIS Item #13427

**Search Position:** 29° 19' 60.0" N, 094° 42' 00.0" W  
**Historical Depth:** [None]  
**Search Radius:** 350  
**Search Technique:** MB,S2,ES,SD  
**Technique Notes:** [None]

#### History Notes:

LNM 23/98- 20 FOOT P/C DANGEROUS WRECK WITH APPROXIMATE POSITION AT 29/20/00.0 - 94/42/00.0. (ENTERED CEH 12/05)

### Survey Summary

**Survey Position:** 29° 20' 00.1" N, 094° 42' 00.0" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 1998-087.00:00:00.000 (03/28/1998)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000582648 00001(02260008E3F80001)  
**Charts Affected:** 11324\_1, 11324\_2, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

WRECKS/remrks: AWOIS radius partially investigated with MB, no wreck found.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000582648 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 13427	3.35	344.8	Secondary (grouped)

### Hydrographer Recommendations

Retain as charted.

## S-57 Data

**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 2:dangerous wreck  
CONRAD - 2:not radar conspicuous  
CONVIS - 2:not visual conspicuous  
NINFOM - Retain wreck  
QUASOU - 2:depth unknown  
SORDAT - 19980328  
SORIND - US,US,graph,chart 11324  
WATLEV - 3:always under water/submerged

## Office Notes

AHB SAR: Survey coverage does not meet AWOIS search radius requirement. Feature not found, nor disproved.

COMPILATION: Concur. Charted dangerous sunken wreck, PA, depth unknown, was not found nor disproved by present survey. Retain as charted.

## 1.12) AWOIS #13426 - Charted visible wreck PA

### Primary Feature for AWOIS Item #13426

**Search Position:** 29° 20' 44.0" N, 094° 41' 17.0" W  
**Historical Depth:** [None]  
**Search Radius:** 300  
**Search Technique:** VS, MB, S2, ES  
**Technique Notes:** Item investigation MB, SSS

#### History Notes:

LNM 40/99-- 16 FOOT P/C VISIBLE WRECK WITH APPROXIMATE POSITION AT 29/20/44.0 - 94/41/17.0. (ENTERED CEH 12/05)

### Survey Summary

**Survey Position:** 29° 20' 44.0" N, 094° 41' 17.0" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 1981-001.00:00:00.000 (01/01/1981)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000596716 00001(022600091AEC0001)  
**Charts Affected:** 11324\_1, 11324\_2, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

\$CSYMB/remrks: AWOIS radius covered with object detection multibeam and SSS. No wreck found.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000596716 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 13426	0.00	000.0	Secondary (grouped)

### Hydrographer Recommendations

Remove visible wreck PA.

## S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

**Attributes:** NINFOM - Delete Wreck

NTXTDS - Chart 11324,ED 37,20120901

## Office Notes

AHB SAR: Survey coverage meets AWOIS search radius requirement. Charted AWOIS feature disproved with 200% SSS and ODMB.

COMPILATION: Delete charted visible Wreck PA. Update area with present survey data.

## 1.13) AWOIS #9018 - Charted 22 foot dangerous wreck

### Primary Feature for AWOIS Item #9018

**Search Position:** 29° 20' 28.7" N, 094° 40' 45.2" W  
**Historical Depth:** [None]  
**Search Radius:** 200  
**Search Technique:** MB,S2,ES,DI,SD  
**Technique Notes:** [None]

#### History Notes:

[None]

### Survey Summary

**Survey Position:** 29° 20' 29.1" N, 094° 40' 45.5" W  
**Least Depth:** 5.76 m (= 18.91 ft = 3.151 fm = 3 fm 0.91 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2010-166.00:00:00.000 (06/15/2010)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000582727 00001(02260008E4470001)  
**Charts Affected:** 11324\_1, 11324\_2, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

WRECKS/remrks: Wreck corresponding to AWOIS item found with MB.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000582727 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 9018	15.37	321.3	Secondary (grouped)

### Hydrographer Recommendations

Update charted wreck.

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

19ft (11324\_1, 11324\_2, 11323\_1, 11326\_6, 11330\_1)

3fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

## S-57 Data

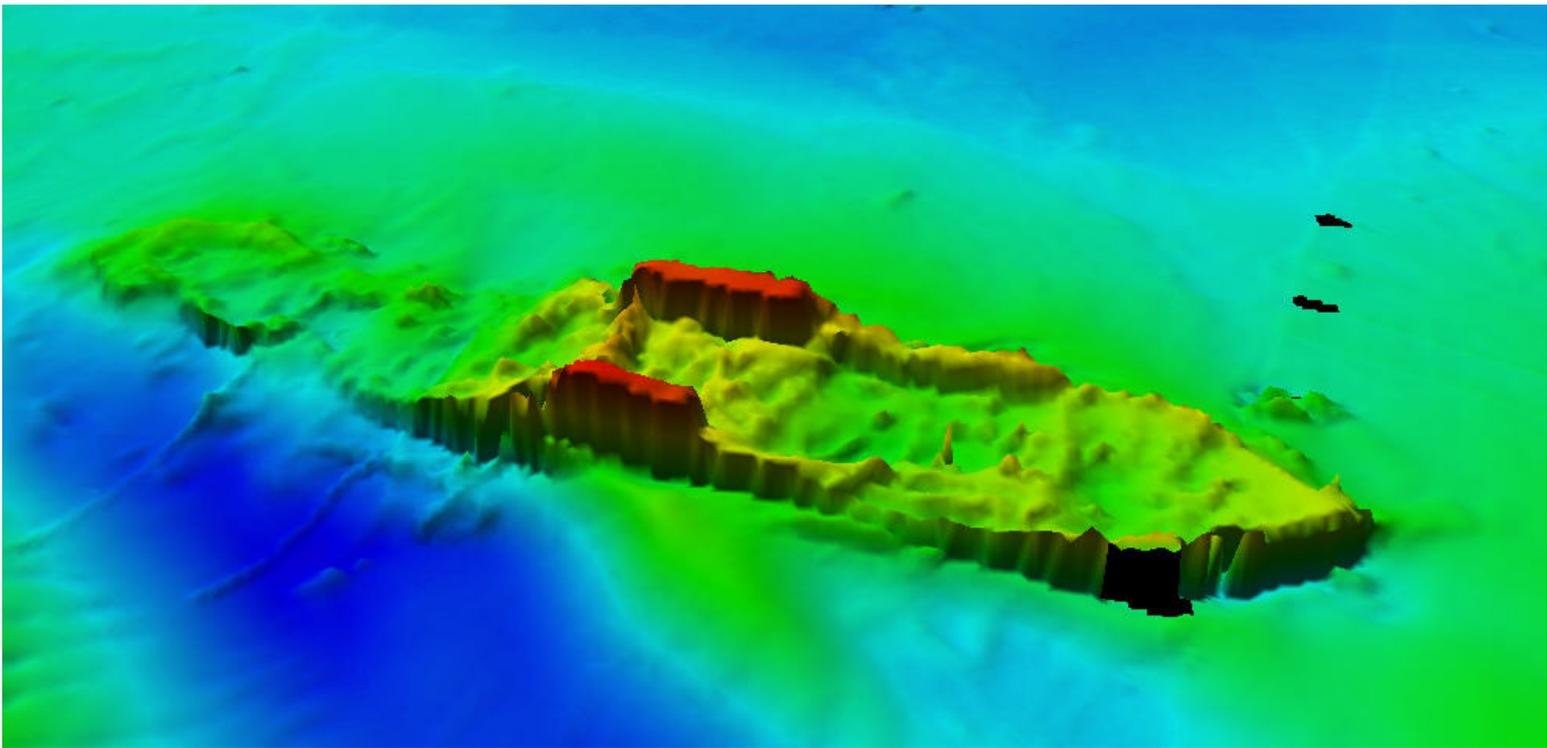
**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 2:dangerous wreck  
NINFOM - Add Wreck  
QUASOU - 6:least depth known  
SORDAT - 20100615  
SORIND - US,US,graph,F00592  
TECSOU - 3:found by multi-beam  
VALSOU - 5.763 m  
WATLEV - 3:always under water/submerged

## Office Notes

AHB SAR: Charted AWOIS feature located at survey position with ODMB.

COMPILATION: Concur. Delete charted dangerous wreck, 22 foot least depth. Add dangerous wreck, least depth 19 feet in present survey location.

### Feature Images



*Figure 1.13.1*

## 1.14) AWOIS #9022 - Retain charted 15 foot dangerous sunken wreck.

### Primary Feature for AWOIS Item #9022

**Search Position:** 29° 20' 42.5" N, 094° 40' 42.3" W  
**Historical Depth:** [None]  
**Search Radius:** 300  
**Search Technique:** MB,ES,VS,SD,S2  
**Technique Notes:** [None]

#### History Notes:

##### HISTORY

LNM98/70--8TH CGD, 10/20/70; THE F/V DIXIE QUEEN REP SUNK 1  
 10/3/70 ON THE CHANNEL SIDE OF GALVESTON NORTH JETTY, APPROX. 300 1  
 YDS LANDWARD OF THE OFFSHORE END. THE WRECK HAS NOT BEEN LOCATED. 1  
 POS. FROM CHART HISTORY. (ENTERED 8/94 MCR)1  
 H-10584/94--OPR-K204-AHP; WRECK LOCATED WITH SIDE SCAN SONAR 1  
 WHILE SEARCHING FOR AWOIS 9021 IS BELIEVED TO BE THE DIXIE QUEEN 1  
 BROKEN UP IN THREE SECTIONS WITH HULL RIBS VISIBLE. SIDE SCAN 1  
 IMAGE INDICTES WRECKAGE IS 12M x 4M. LEAST DEPTH IS 15.4 FT IN POS. 1  
 LAT.29-20-42.5N, LONG.94-40-42.3W. UPDATED 9/98 MCR

### Survey Summary

**Survey Position:** 29° 20' 42.6" N, 094° 40' 42.3" W  
**Least Depth:** 4.50 m (= 14.76 ft = 2.461 fm = 2 fm 2.76 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 1998-087.00:00:00.000 (03/28/1998)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000582784 00001(02260008E4800001)  
**Charts Affected:** 11324\_1, 11324\_2, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

WRECKS/remrks: Feature not found within southern half of search radius. Not enough coverage for disproval.

## Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000582784 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 9022	3.27	017.3	Secondary (grouped)

## Hydrographer Recommendations

Retain as charted.

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

15ft (11324\_1, 11324\_2, 11323\_1, 11326\_6, 11330\_1)

2 ½fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

## S-57 Data

**Geo object 1:** Wreck (WRECKS)

**Attributes:**

CATWRK - 2:dangerous wreck

CONRAD - 2:not radar conspicuous

CONVIS - 2:not visual conspicuous

EXPSOU - 2:shoaler than range of depth of the surrounding depth area

NINFOM - Retain Wreck

QUASOU - 6:least depth known

SORDAT - 19980328

SORIND - US,US,graph,chart 11324

VALSOU - 4.500 m

WATLEV - 3:always under water/submerged

## Office Notes

AHB SAR: Survey coverage insufficient for disproval. Feature not found, nor disproved.

COMPILATION: Concur. Feature not completely developed. Retain 15 foot dangerous sunken wreck as charted.

## 1.15) AWOIS #13425 - Charted dangerous wreck, PA, depth unknown

### Primary Feature for AWOIS Item #13425

**Search Position:** 29° 20' 42.0" N, 094° 40' 42.0" W  
**Historical Depth:** [None]  
**Search Radius:** 300  
**Search Technique:** MB,S2,ES  
**Technique Notes:** [None]

#### History Notes:

LNM 26/02-- 25 FOOT P/C IS CHARTED AS DANGEROUS WRECK WITH APPROXIMATE POSITION AT 29/20/42.0 - 94/40/42.0. (ENTERED CEH 12/05)

### Survey Summary

**Survey Position:** 29° 20' 41.9" N, 094° 40' 35.7" W  
**Least Depth:** 19.17 m (= 62.89 ft = 10.481 fm = 10 fm 2.89 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2010-166.00:00:00.000 (06/15/2010)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000582781 00001(02260008E47D0001)  
**Charts Affected:** 11324\_1, 11324\_2, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

WRECKS/remrks: Wreck found with MB. Interpreted as AWOIS #13425 (Wreck PA).

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000582781 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 13425	171.47	090.6	Secondary (grouped)

### Hydrographer Recommendations

Update Wreck and remove "PA" label.

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

63ft (11324\_1, 11324\_2, 11323\_1, 11326\_6, 11330\_1)

10 ½fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

### S-57 Data

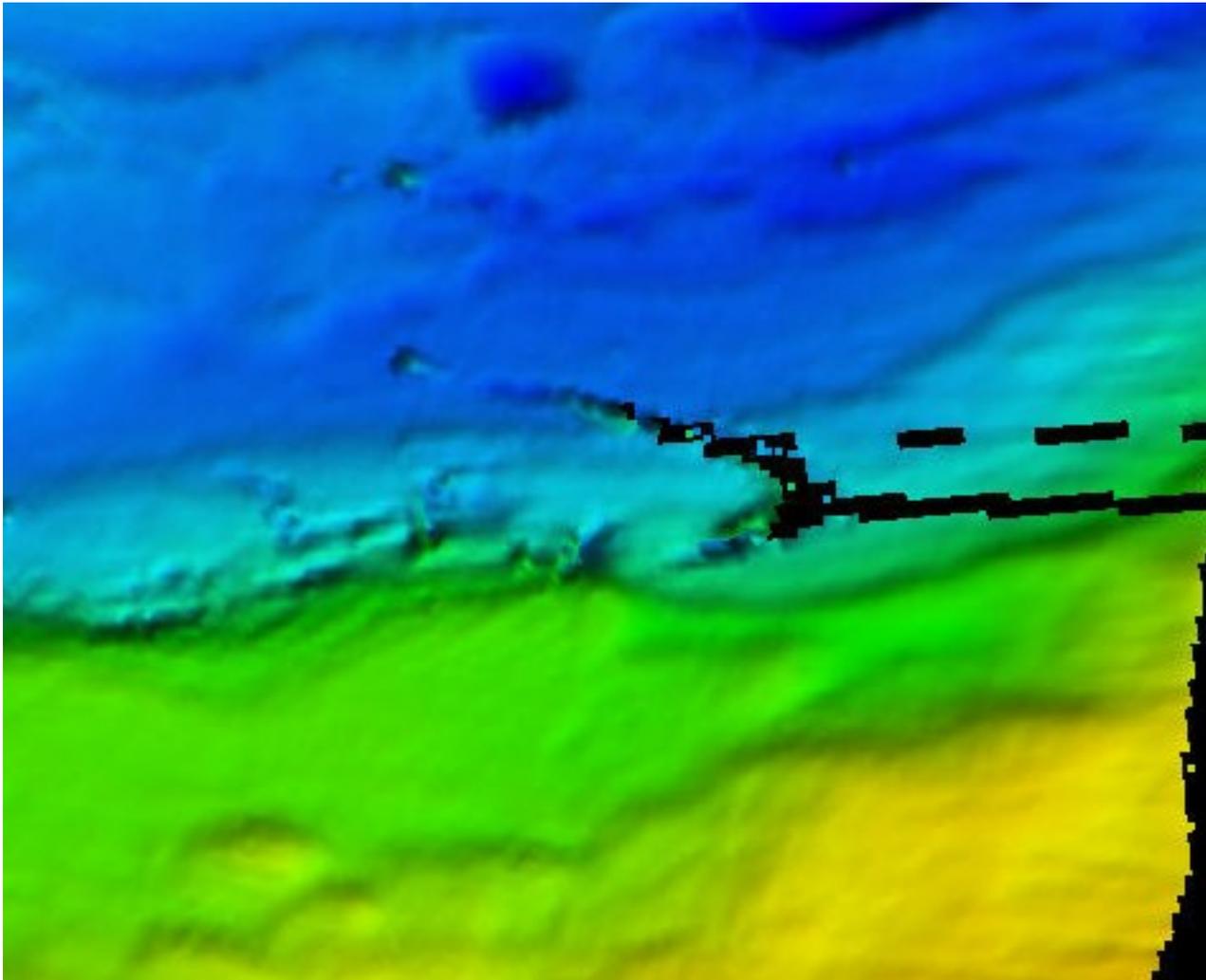
**Geo object 1:** Wreck (WRECKS)  
**Attributes:** CATWRK - 2:dangerous wreck  
NINFOM - Add wreck  
QUASOU - 6:least depth known  
SORDAT - 20100615  
SORIND - US,US,graph,F00592  
TECSOU - 3:found by multi-beam  
VALSOU - 19.168 m  
WATLEV - 3:always under water/submerged

### Office Notes

AHB SAR: Charted AWOIS feature located at survey position with ODMB.

COMPILATION: Do not concur. Feature was not sufficiently investigated, multibeam was inadequate to update charted feature. Present survey data does not portray a wreck. Retain wreck as charted.

### Feature Images



*Figure 1.15.1*

## 1.16) AWOIS #14779 - Charted partially covered wreck PA

### Primary Feature for AWOIS Item #14779

**Search Position:** 29° 20' 24.0" N, 094° 40' 30.0" W  
**Historical Depth:** [None]  
**Search Radius:** 200  
**Search Technique:** MB, S2, ES, VS  
**Technique Notes:** Item Investigation MB, SSS

#### History Notes:

LNM 48/98--VISIBLE WRECK SYMBOL "AWASH", "(CGD8 149-98) (25FT CUDDY CABIN) PA" position: 29°20'24.0"N 094°40'30.0"W. Entered by RES on 4/23/10.

### Survey Summary

**Survey Position:** 29° 20' 24.0" N, 094° 40' 30.0" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 1998-335.00:00:00.000 (12/01/1998)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000596767 00001(022600091B1F0001)  
**Charts Affected:** 11324\_1, 11324\_2, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

WRECKS/remrks: AWOIS search radius partially ensonified with MB, but not fully covered.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000596767 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 14779	0.59	318.8	Secondary (grouped)

### Hydrographer Recommendations

Recommend to complete the AWOIS search radius with MB development.

## S-57 Data

**Geo object 1:** Wreck (WRECKS)

**Attributes:** CATWRK - 2:dangerous wreck  
CONVIS - 2:not visual conspicuous  
INFORM - 7.6 meters/25 feet vessel  
NINFOM - Revise partially covered wreck to dangerous submerged wreck PA  
QUASOU - 2:depth unknown  
SORDAT - 19981201  
SORIND - US,US,reprt,8thCGD,LNM 48/98  
WATLEV - 3:always under water/submerged

## Office Notes

SAR: AWOIS search radius not adequately ensonified. Feature not confirmed, nor disproved. Recommend to retain.

COMPILATION: Concur with conditions. Feature not fully investigated but no partially covered wreck found in charted vicinity. Delete charted partially covered wreck PA. Add dangerous sunken wreck PA in charted location.

Feature Images

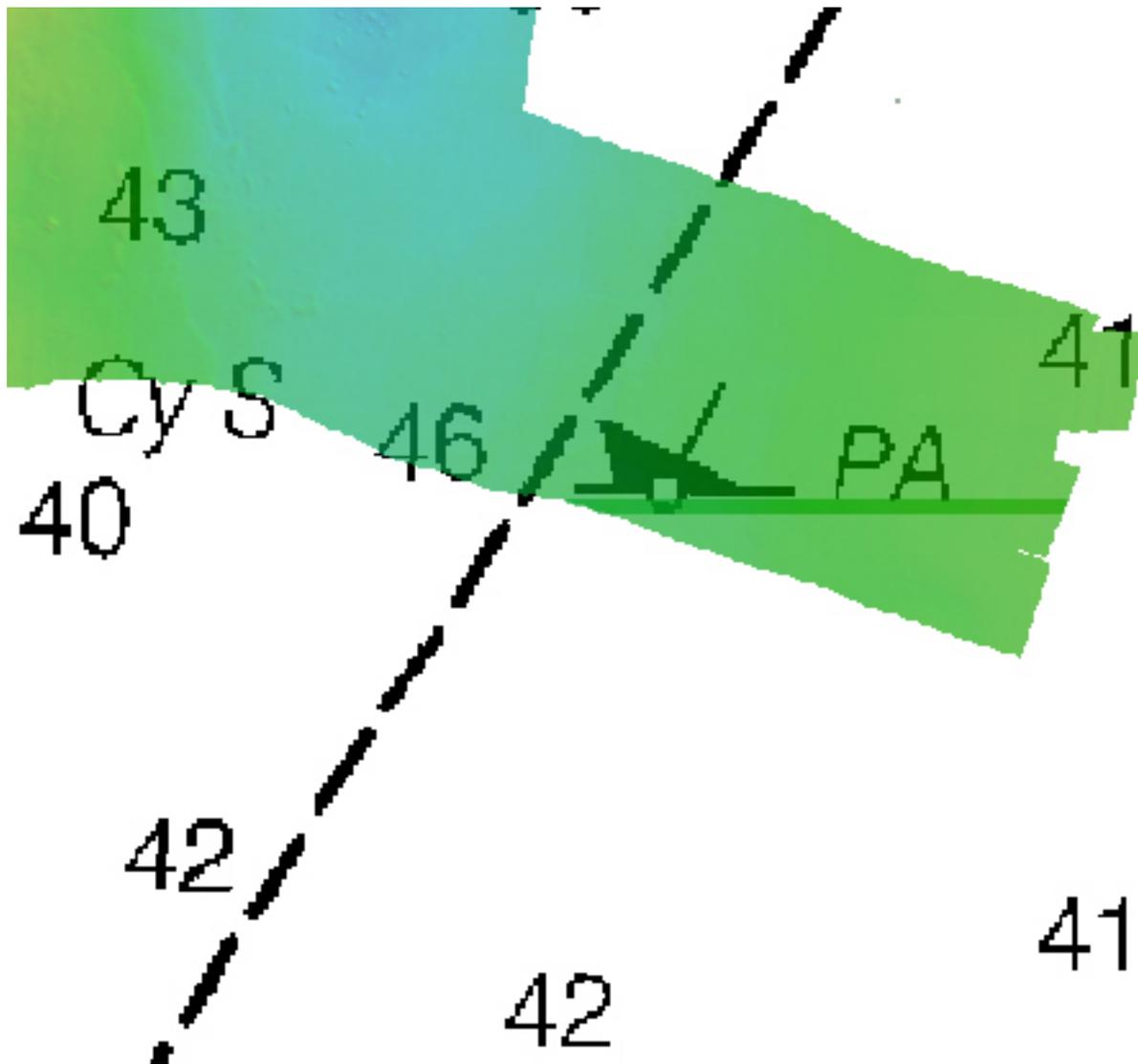


Figure 1.16.1

## 1.17) AWOIS #11099 - Charted 45 foot dangerous obstruction

### Primary Feature for AWOIS Item #11099

**Search Position:** 29° 15' 28.0" N, 094° 33' 55.8" W  
**Historical Depth:** 13.72 m  
**Search Radius:** 300  
**Search Technique:** [None]  
**Technique Notes:** item investigation MB, SSS

#### History Notes:

H10835/98-99--OPR-K171-KR; LOCATED AN OBSTRUCTION BY SIDE SCAN SONAR AND MULTIBEAM ECHOSOUNDER IN LAT. 29/15/27.97N, LONG. 094/33/55.76W (NAD83) WITH A LEAST DEPTH OF 45 FEET MLLW. (ENTERED 9/01 BY MBH)

S-K614-WH-02 (HLS) -- 200% SSS coverage was acquired over 70% of charted obstruction circle. One contact was found at position 29° 15' 28.14" N, 094° 33' 55.99" W, the object showed little shadow, determined to not be significant and was not developed. Hydrographer recommends retaining charted obstruction.. Updated JCM 7/26/2006

### Survey Summary

**Survey Position:** 29° 15' 27.9" N, 094° 33' 55.7" W  
**Least Depth:** 14.03 m (= 46.01 ft = 7.669 fm = 7 fm 4.01 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2010-166.00:00:00.000 (06/15/2010)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000582625 00001(02260008E3E10001)  
**Charts Affected:** 11323\_1, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

OBSTRN/remrks: AWOIS obstruction found with MB.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000582625 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 11099	1.36	123.8	Secondary (grouped)

## Hydrographer Recommendations

Modify charted obstruction.

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

46ft (11323\_1, 11330\_1)

7 ½fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

## S-57 Data

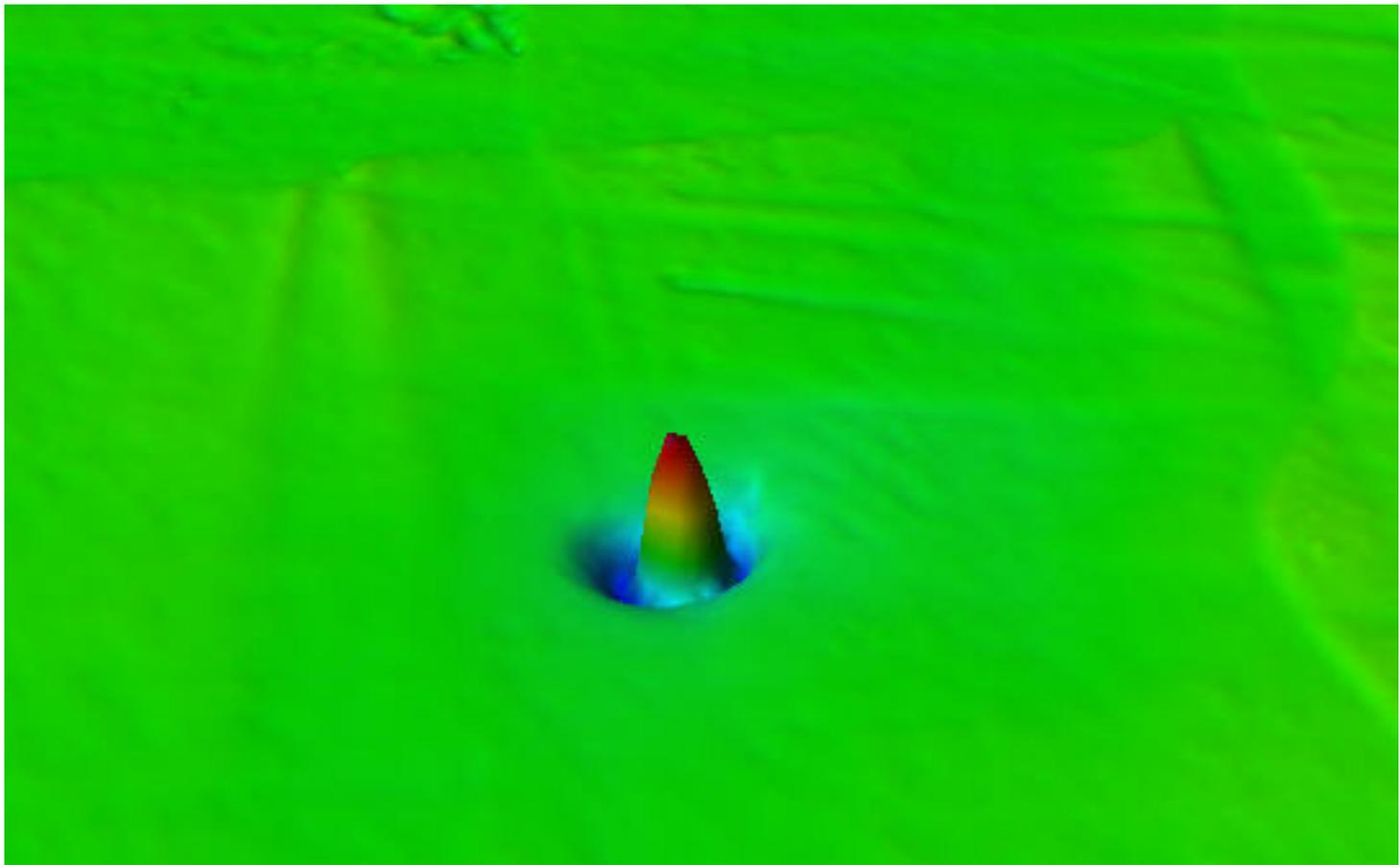
**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** NINFOM - Add obstruction  
QUASOU - 6:least depth known  
SORDAT - 20100615  
SORIND - US,US,graph,F00592  
TECSOU - 3:found by multi-beam  
VALSOU - 14.025 m  
WATLEV - 3:always under water/submerged

## Office Notes

AHB SAR: Charted AWOIS feature located at survey position with ODMB.

COMPILATION: Concur. Delete charted 45 ft dangerous obstruction. Add 46 foot dangerous obstruction in present survey location.

### Feature Images



*Figure 1.17.1*

## 1.18) AWOIS #11096 - Charted 48 foot dangerous obstruction

### Primary Feature for AWOIS Item #11096

**Search Position:** 29° 14' 32.2" N, 094° 30' 23.0" W  
**Historical Depth:** 14.63 m  
**Search Radius:** 300  
**Search Technique:** [None]  
**Technique Notes:** item investigation MB, SSS

#### History Notes:

H10835/98-99--OPR-K171-KR; LOCATED AN OBSTRUCTION BY SIDE SCAN SONAR AND MULTIBEAM ECHOSOUNDER IN LAT. 29/14/32.16N, LONG. 094/30/23.04W (NAD83) WITH A LEAST DEPTH OF 48 FEET MLLW. (ENTERED 9/01 BY MBH)

### Survey Summary

**Survey Position:** 29° 14' 31.5" N, 094° 30' 22.4" W  
**Least Depth:** 14.49 m (= 47.53 ft = 7.922 fm = 7 fm 5.53 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2010-166.00:00:00.000 (06/15/2010)  
**Dataset:** F00592\_AWOIS Items.000  
**FOID:** US 0000494217 00001(022600078A890001)  
**Charts Affected:** 11323\_1, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

OBSTRN/remrks: Obstruction found with MB.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items.000	US 0000494217 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12	AWOIS # 11096	25.90	141.6	Secondary (grouped)

### Hydrographer Recommendations

Revise charted obstruction.

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

47ft (11323\_1, 11330\_1)

7 ¾fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

### S-57 Data

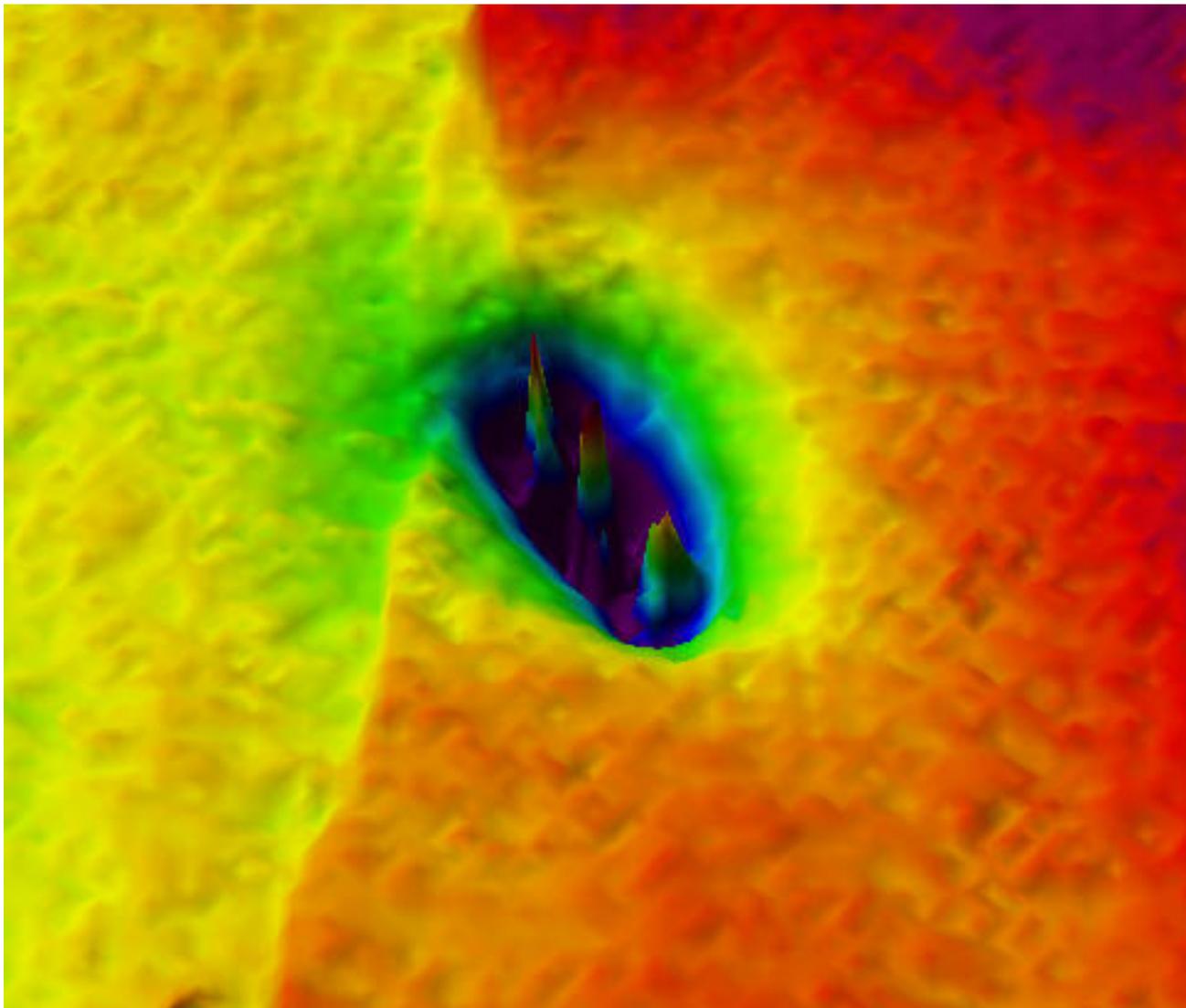
**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** CATOBS - 1:snag / stump  
EXPSOU - 2:shoaler than range of depth of the surrounding depth area  
NINFOM - Add Obstruction  
QUASOU - 6:least depth known  
SORDAT - 20100615  
SORIND - US,US,graph,F00592  
TECSOU - 3:found by multi-beam  
VALSOU - 14.488 m  
WATLEV - 3:always under water/submerged

### Office Notes

AHB SAR: Charted AWOIS feature located at survey position with ODMB.

COMILATION: Concur. Delete charted dangerous 48 foot obstruction. Add dangerous 47 foot obstruction in present survey location.

### Feature Images



*Figure 1.18.1*

## 1.19) AWOIS #14783 - Charted 45 foot dangerous obstruction

### Primary Feature for AWOIS Item #14783

**Search Position:** 29° 15' 38.5" N, 094° 33' 58.2" W  
**Historical Depth:** 13.72 m  
**Search Radius:** 200  
**Search Technique:** [None]  
**Technique Notes:** item investigation MB, SSS

#### History Notes:

L-1363(2005)--Obstruction (DTON letter) Added dotted danger curve, blue tint, and 45 ft sounding (revised existing obstruction label from: Obsbn to: Obsbns due to another obstruction in the same vicinity. This information was forwarded to Texas based Navigation Manager, Alan Bunn, by the THOMAS JEFFERSON in response to Hurricane Rita. Entered by RES on 4/26/10.

### Survey Summary

**Survey Position:** 29° 15' 38.5" N, 094° 33' 58.2" W  
**Least Depth:** 13.70 m (= 44.95 ft = 7.491 fm = 7 fm 2.95 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 2005-307.00:00:00.000 (11/03/2005)  
**Dataset:** F00592\_AWOIS Items\_3.000  
**FOID:** US 0000582630 00001(02260008E3E60001)  
**Charts Affected:** 11323\_1, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

AWOIS search radius not fully surveyed.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items_3.000	US 0000582630 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12_3	AWOIS # 14783	0.07	000.0	Secondary (grouped)

### Hydrographer Recommendations

Retain as charted.

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

45ft (11323\_1, 11330\_1)

7 ½fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)

**Attributes:** NINFOM - Retain Obstruction

QUASOU - 6:least depth known

SORDAT - 20051103

SORIND - US,US,reprt,L-1363/05

VALSOU - 13.700 m

WATLEV - 3:always under water/submerged

### Office Notes

AHB SAR: Survey coverage does not meet AWOIS search radius requirement. Feature not found, nor disproved.

COMPILATION: Concur. Feature not adequately investigated to disprove. Retain dangerous 45 foot obstruction as charted.

## 1.20) AWOIS #14352 - Charted obstruction, least depth 28 feet

### Primary Feature for AWOIS Item #14352

**Search Position:** 29° 20' 47.4" N, 094° 45' 23.4" W  
**Historical Depth:** 8.53 m  
**Search Radius:** 200  
**Search Technique:** MB, ES, S2  
**Technique Notes:** Item Investigation, MB, SSS

#### History Notes:

H11528/06-- OPR-K414-NRT4-06; Contact found during 200% SSS. Recommended to chart Obstn with least depth of 28 ft. (Updated CEH 10/2008)

### Survey Summary

**Survey Position:** 29° 20' 47.4" N, 094° 45' 23.4" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 1981-001.00:00:00.000 (01/01/1981)  
**Dataset:** F00592\_AWOIS Items\_2.000  
**FOID:** US 0000596733 00001(022600091AFD0001)  
**Charts Affected:** 11324\_1, 11324\_2, 11331\_4, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

\$CSYMB/remrks: AWOIS radius investigated with MB, no obstruction found.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items_2.000	US 0000596733 00001	0.00	000.0	Primary
AWOIS_EXPORT_10_17_12_2	AWOIS # 14352	0.00	000.0	Secondary (grouped)

### Hydrographer Recommendations

Remove AWOIS obstruction.

## S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

**Attributes:** NINFOM - Delete obstruction

NTXTDS - Chart 11324,ED 37,20120901

## Office Notes

AHB SAR: Survey coverage meets AWOIS search radius requirement. Charted AWOIS feature disproved with ODMB.

COMPILATION: Concur. Delete charted 28 foot dangerous obstruction. Update area with present survey depths.

## 1.21) AWOIS #11085 - Charted 46 foot dangerous obstruction

### Primary Feature for AWOIS Item #11085

**Search Position:** 29° 14' 29.7" N, 094° 30' 54.6" W  
**Historical Depth:** 14.02 m  
**Search Radius:** 300  
**Search Technique:** [None]  
**Technique Notes:** item investigation MB, SSS

#### History Notes:

H10835/98-99--OPR-K171-KR; LOCATED AN OBSTRUCTION BY SIDE SCAN SONAR AND MULTIBEAM ECHOSOUNDER IN LAT. 29/14/29.69N, LONG. 094/30/54.56W (NAD83) WITH A LEAST DEPTH OF 46 FEET MLLW. (ENTERED 9/01 BY MBH)

### Survey Summary

**Survey Position:** 29° 14' 39.0" N, 094° 30' 54.7" W  
**Least Depth:** 14.00 m (= 45.93 ft = 7.655 fm = 7 fm 3.93 ft)  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 1999-025.00:00:00.000 (01/25/1999)  
**Dataset:** F00592\_AWOIS Items\_after content review\_2.000  
**FOID:** US 0000494126 00001(022600078A2E0001)  
**Charts Affected:** 11323\_1, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

OBSTRN/remrks: AWOIS radius not fully covered. Obstruction not found.

### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_AWOIS Items_after content review_2.000	US 0000494126 00001	0.00	000.0	Primary
AWOIS_EXPORT	AWOIS # 11085	123.70	150.1	Secondary (grouped)

### Hydrographer Recommendations

Retain as charted.

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

46ft (11323\_1, 11330\_1)

7 ½fm (1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1)

### S-57 Data

**Geo object 1:** Obstruction (OBSTRN)  
**Attributes:** EXPSOU - 1:within the range of depth of the surrounding depth area  
NINFOM - Retain Obstruction  
QUASOU - 6:least depth known  
SORDAT - 19990125  
SORIND - US,US,graph,H-10835  
VALSOU - 14.000 m  
WATLEV - 3:always under water/submerged

### Office Notes

AHB SAR: Survey coverage does not meet AWOIS search radius requirement. Feature not found, nor disproved.

COMPILE: Feature not fully investigated by field. Retain as charted.

# F00592\_Danger to Navigation Report

Registry Number: F00592

State: Texas

Locality: Galveston

Sub-locality: Bolivar Roads

Project Number: OPR-K380-TJ-10

Survey Date: April 19, 2010 to June 15, 2010

## Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11324	36th	01/01/2009	1:25,000 (11324_2) 1:25,000 (11324_1)	[L]NTM: ?
11323	62nd	12/01/2006	1:80,000 (11323_1)	[L]NTM: ?
11326	36th	09/01/2008	1:80,000 (11326_6)	[L]NTM: ?
11330	19th	08/01/2008	1:250,000 (11330_1)	[L]NTM: ?
11340	73rd	08/01/2008	1:458,596 (11340_1)	[L]NTM: ?
1116A	73rd	08/01/2008	1:458,596 (1116A_1)	[L]NTM: ?
1117A	42nd	03/01/2008	1:460,732 (1117A_1)	[L]NTM: ?
11300	42nd	03/01/2008	1:460,732 (11300_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	DTON #01 - 11ft OBSTRN - disproval	GP	[None]	29° 20' 11.2" N	094° 42' 38.0" W	---

## 1.1) DTON #01 - 11ft OBSTRN - disproval

### DANGER TO NAVIGATION

#### Survey Summary

**Survey Position:** 29° 20' 11.2" N, 094° 42' 38.0" W  
**Least Depth:** [None]  
**TPU ( $\pm 1.96\sigma$ ):** THU (TPEh) [None] ; TVU (TPEv) [None]  
**Timestamp:** 1981-001.00:00:00.000 (01/01/1981)  
**Dataset:** F00592\_DTON Items.000  
**FOID:** US 0000596763 00001(022600091B1B0001)  
**Charts Affected:** 11324\_1, 11324\_2, 11323\_1, 11326\_6, 11330\_1, 1116A\_1, 11340\_1, 1117A\_1, 11300\_1, 411\_1

#### Remarks:

Obstruction found with MB.

Update: Further investigation proved feature did not exist.

#### Feature Correlation

Source	Feature	Range	Azimuth	Status
F00592_DTON Items.000	US 0000596763 00001	0.00	000.0	Primary

#### Hydrographer Recommendations

Remove dangerous obstruction.

#### S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)  
**Attributes:** NINFOM - Delete Obstruction  
 NTXTDS - Chart 11324,ED 37,20120901

## Office Notes

AHB SAR: Initial DTON submission found to be incorrect. Charted feature disproved with ODMB. Data review by the field unit, post DtoN submission indicates the data points reference a burst of noise within the water column. The aberrant data points were sourced from only one bathy line and not validated by other source bathy line files that have common coverage.

COMPILATION: Concur. Delete charted dangerous obstruction, least depth 11 feet that was added as a result of DTON#01 submitted as part of the present survey. Update chart with present survey depths.

### Feature Images

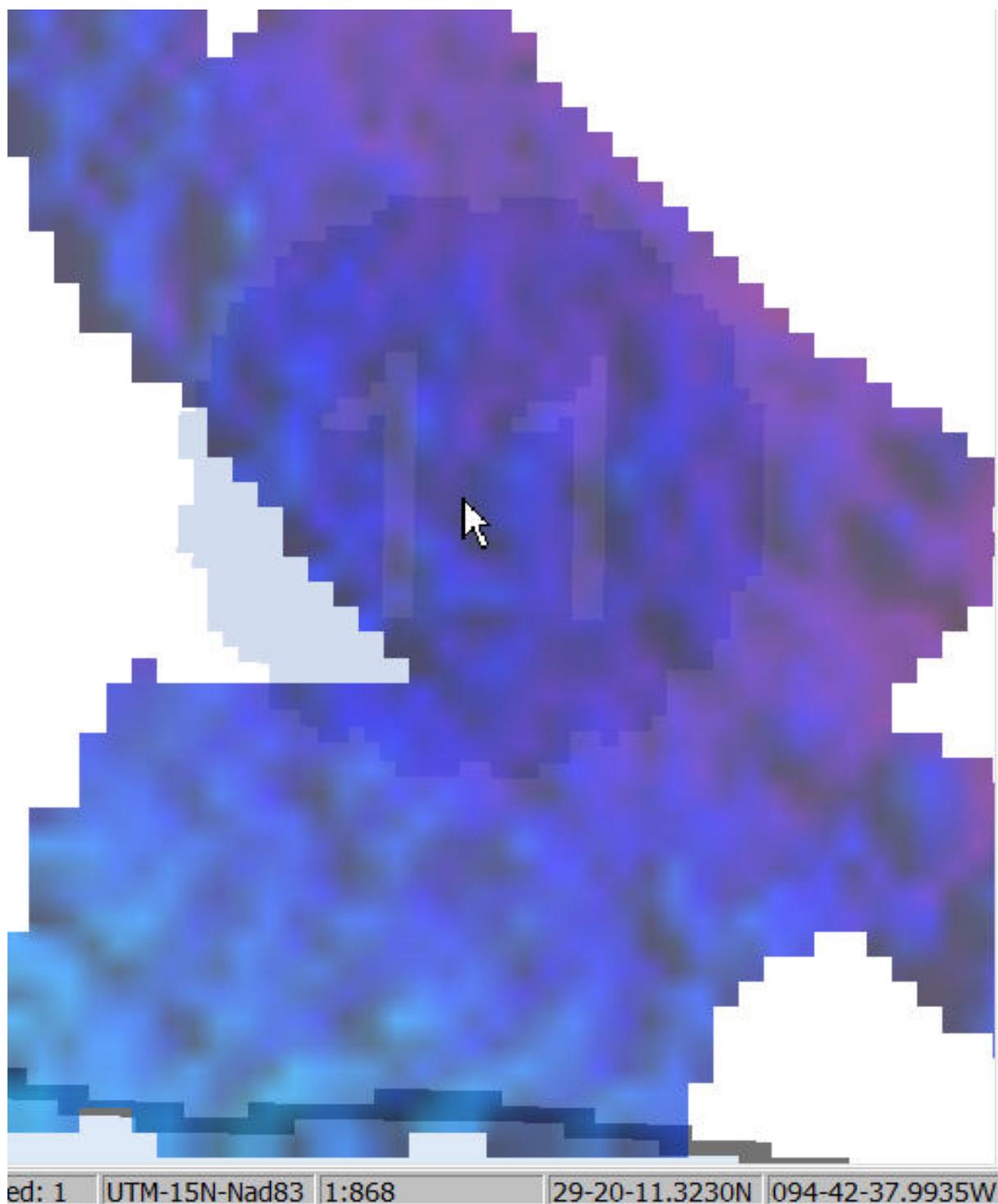


Figure 1.1.1

APPROVAL PAGE

F00592

Data meet or exceed current specifications as certified by the OCS survey acceptance review process. Descriptive Report and survey data except where noted are adequate to supersede prior surveys and nautical charts in the common area.

The following products will be sent to NGDC for archive

- F00592\_DR.pdf
- Collection of depth varied resolution BAGS
- Processed survey data and records
- F00592\_GeoImage.pdf

The survey evaluation and verification has been conducted according to current OCS Specifications, and the survey has been approved for dissemination and usage of updating NOAA's suite of nautical charts.

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

**LT Abigail Higgins**  
Chief, Atlantic Hydrographic Branch