12528

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Survey

DESCRIPTIVE REPORT

Type of Survey:	Basic Hydrographic Survey
Registry Number:	H12528

LOCALITY

State(s):	Mississippi
General Locality:	Approaches to Mississippi Sound
Sub-locality:	Vicinity of North Chandeleur Islands

2013

CHIEF OF PARTY
Jonathan L. Dasler, PE, PLS, CH

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Date:

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
HYDROGRAPHIC TITLE SHEET	**H12528**

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(s):	**Mississippi**
General Locality:	**Approaches to Mississippi Sound**
Sub-Locality:	**Vicinity of North Chandeleur Islands**
Scale:	**40000**
Dates of Survey:	**03/15/2013 to 10/27/2013**
Instructions Dated:	**03/25/2013**
Project Number:	**OPR-J348-KR-13**
Field Unit:	**David Evans & Associates, Inc.**
Chief of Party:	**Jonathan L. Dasler, PE, PLS, CH**
Soundings by:	**RESON 7125**
Imagery by:	**EdgeTech 4200-FS**
Verification by:	***Atlantic Hydrographic Branch***
Soundings Acquired in:	**meters at Mean Lower Low Water**

Remarks:

NAD 83, UTM Zone 16, Meters, Times are UTC. The purpose of this contract is to provide NOAA with modern, accurate hydrographic survey data with which to update nautical charts of the assigned area.

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. Any revisions to the Descriptive Report (DR) generated during office processing are shown in bold red italic text. The processing branch maintains the DR as a field unit product, therefore, all information and recommendations within the body of the DR are considered preliminary unless otherwise noted. The final disposition of surveyed features is represented in the OCS nautical chart update products. All pertinent records for this survey, including the DR, are archived at the National Geophysical Data Center (NGDC) and can be retrieved via http://www.ngdc.noaa.gov/.

Table of Contents

List of Tables

List of Figures

Descriptive Report to Accompany Survey H12528

Project: OPR-J348-KR-13

Locality: Approaches to Mississippi Sound

Sublocality: Vicinity of North Chandeleur Islands

Scale: 1:40000

March 2013 - October 2013

David Evans & Associates, Inc.

Chief of Party: Jonathan L. Dasler, PE, PLS, CH

A. Area Surveyed

David Evans and Associates, Inc (DEA) conducted hydrographic survey operations in the Approaches to Mississippi Sound, MS in the vicinity of the North Chandeleur Islands. Survey H12528 was conducted in accordance with the Statement of Work (April 29, 2013) and Hydrographic Survey Project Instructions (revised) (March 25, 2013).
The Hydrographic Survey Project Instructions reference the 2012 Hydrographic Surveys Specifications and Deliverables (HSSD), but the OPR-J348-KR-13 surveys were performed using the 2013 HSSD with the exception of the holiday specification for Set Line Spacing Surveys (Section 5.2.2.3) which uses the 2012 specification of no gaps in the entire multibeam swath greater than 3 nodes along track. This modification was approved by Hydrographic Surveys Division (HSD) staff.

A.1 Survey Limits

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
30° 6" 10.77' N 88° 56" 30.15' W	29° 58" 31.79' N 88° 46" 10.73' W

Table 1: Survey Limits

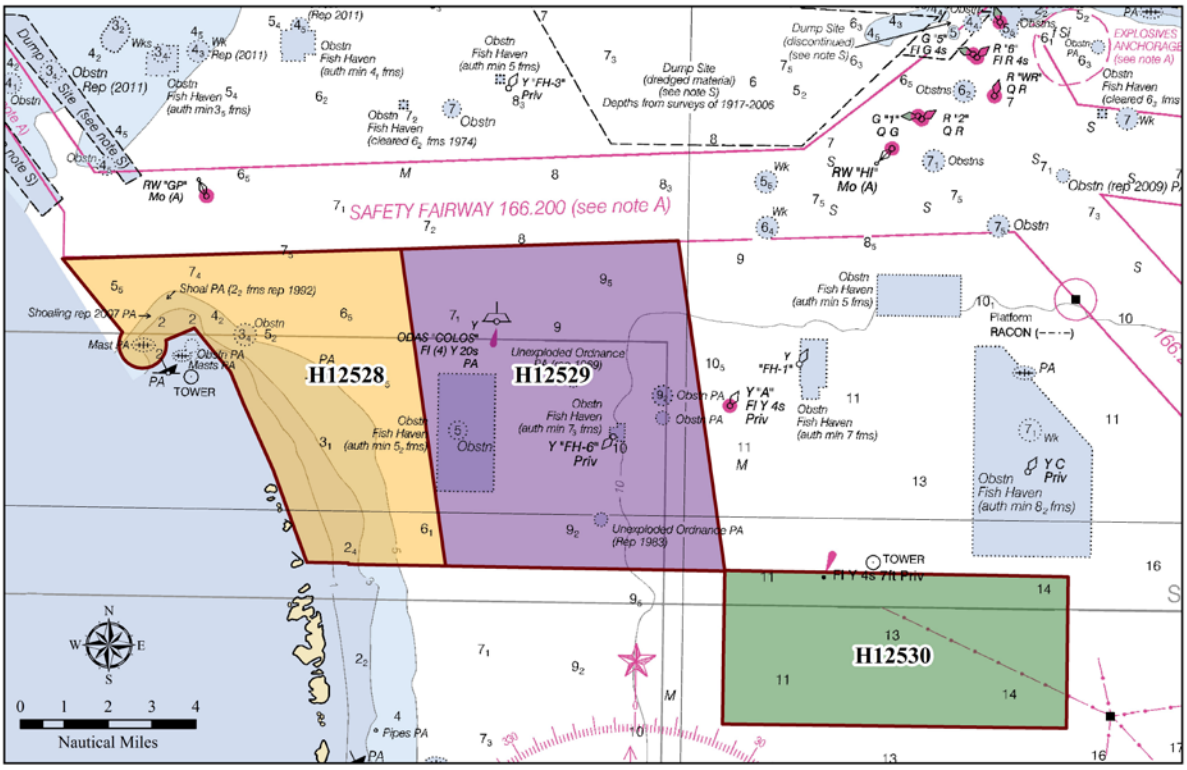


Figure 1: OPR-J348-KR-13 Assigned Survey Areas

Survey Limits were acquired in accordance with the requirements in the Project Instructions and the HSSD.

A.2 Survey Purpose

The purpose of this survey is to provide National Oceanic Atmospheric Administration (NOAA) with modern, accurate hydrographic survey data with which to update nautical charts of the assigned area.

A.3 Survey Quality

The entire survey is adequate to supersede previous data.

A.4 Survey Coverage

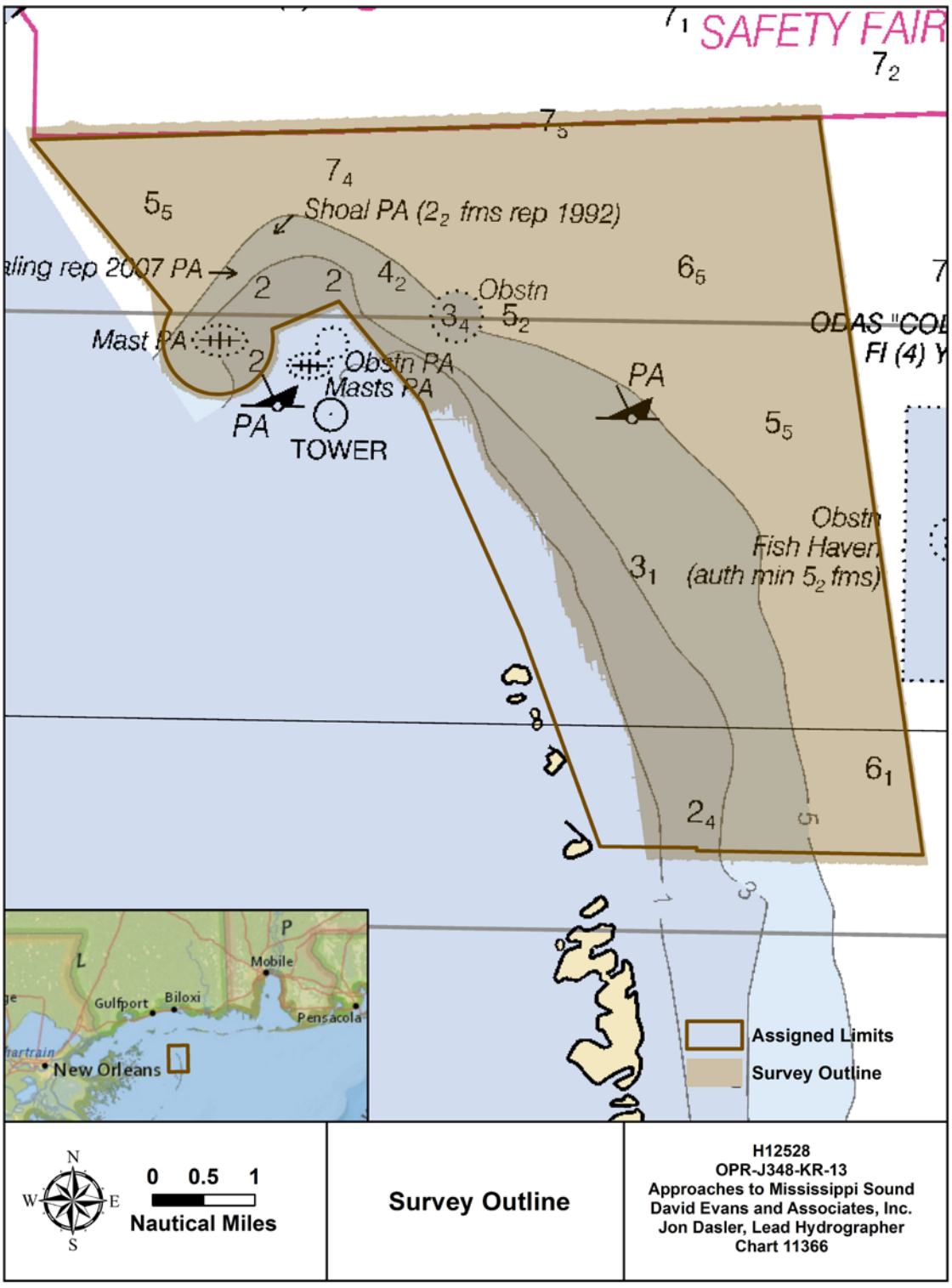


Figure 2: H12528 Survey Outline

The survey consisted of 200% side scan sonar coverage with concurrent multibeam in waters 4 meters and deeper. The survey polygon depicted in the Project Reference File (PRF) OPR-J348-KR-13_PRF.000, which was included with the Hydrographic Survey Project Instructions (March 25, 2013 revised), was used to define the limits for each survey. The survey was conducted over 80-meter and 130-meter set line spacing per 100% coverage (50-meter and 75-meter side scan sonar ranges, respectively). Automated Wreck and Obstruction Information System (AWOIS) items identified by side scan sonar and significant side scan sonar contacts were developed with multibeam sonar to meet object detection coverage requirements for multibeam surveys. The coverage area totaled 33.5 square nautical miles using a combination of side scan and multibeam survey methods. Areas within the assigned survey polygon included in the PRF that were inshore of the surveyed 4-meter contour were not surveyed.

A waiver was granted by HSD staff via email on November 8, 2013 eliminating the need to reduce effective range based on side scan towfish height (HSSD 6.1.2.3) within the search radius of AWOIS #14960 when data were acquired inshore of the 4-meter inshore limit. This waiver allowed the full disproval of AWOIS #14960 as portions of the search radius extended inshore of the surveyed 4-meter curve. A copy of this email is included in Appendix II.

A.5 Survey Statistics

The following table lists the mainscheme and crossline acquisition mileage for this survey:

	Vessel	*R/V Westerly*	***Total***
LNM	**SBES Mainscheme**	0	0
	MBES Mainscheme	0	0
	Lidar Mainscheme	0	0
	SSS Mainscheme	0	0
	SBES/MBES Combo Mainscheme	0	0
	SBES/SSS Combo Mainscheme	0	0
	MBES/SSS Combo Mainscheme	1200.1	1200.1
	SBES/MBES Combo Crosslines	102.6	102.6
	Lidar Crosslines	0	0
Number of Bottom Samples			7
Number AWOIS Items Investigated			3
Number Maritime Boundary Points Investigated			0
Number of DPs			0
Number of Items Items Investigated by Dive Ops			0
Total Number of SNM			33.5

Table 2: Hydrographic Survey Statistics

The following table lists the specific dates of data acquisition for this survey:

Survey Dates	Julian Day Number
03/15/2013	74
03/17/2013	76
03/18/2013	77
03/27/2013	86
03/28/2013	87
03/29/2013	88
03/30/2013	89
04/01/2013	91
04/06/2013	96
04/07/2013	97
04/15/2013	105
04/24/2013	114
04/27/2013	117
04/28/2013	118
04/29/2013	119
04/30/2013	120
05/07/2013	127
05/08/2013	128
06/12/2013	163
07/10/2013	191
07/12/2013	193
07/13/2013	194
07/26/2013	207
07/29/2013	210
07/30/2013	211
08/02/2013	214
08/03/2013	215
08/04/2013	216
08/07/2013	219
08/08/2013	220
10/14/2013	287
10/16/2013	289
10/24/2013	297
10/27/2013	300

B. Data Acquisition and Processing

B.1 Equipment and Vessels

The OPR-J348-KR-13 Data Acquisition and Processing Report (DAPR) submitted under separate cover, details equipment and vessel information as well as data acquisition and processing procedures used during this survey. There were no vessel or equipment configurations used during data acquisition that deviated from those described in the DAPR.

B.1.1 Vessels

The following vessels were used for data acquisition during this survey:

Hull ID	***R/V Westerly***
LOA	38 feet
Draft	4.6 feet

Table 4: Vessels Used

Figure 3: R/V Westerly

B.1.2 Equipment

The following major systems were used for data acquisition during this survey:

Manufacturer	Model	Type
RESON	7125-SV2	MBES
Edgetech	4200-FS	SSS
AML	Micro X / SV Xchange	Surface Sound Speed
Brooke Ocean	MVP-30 with AML Micro SVPT	Primary Sound Speed Profiler
Sea-Bird	SEACAT SBE-19 CTD Profiler	Secondary Sound Speed Profiler
Applanix	POS/MV 320 v4	Positioning & Attitude

Table 5: Major Systems Used

B.2 Quality Control

B.2.1 Crosslines

Crosslines, acquired for this survey, totalled 8.6% of mainscheme acquisition.

Crosslines were run in a direction perpendicular to main scheme lines across the entire surveyed area, providing a good representation for analysis of consistency. All crosslines were used for crossline comparisons.
Crossline analysis was performed using the CARIS Hydrographic Information Processing System (HIPS) Quality Control (QC) Report tool, which compares crossline data to a gridded surface and reports results by beam number. Crosslines were compared to a 4-meter CUBE surface encompassing mainscheme data for the entire survey area. The QC Report tabular output and plot are included in Separate II Digital Data. The results of the analysis meet the requirements as stated in the 2013 HSSD.
Additional crossline analysis was performed by computing a 4-meter CUBE surface from the crossline data. The surface was then differenced from a 4-meter CUBE surface comprised of all mainscheme, fill, and investigation data. The resultant difference surface was exported using the Base Surface to American Standard Code for Information Interchange (ASCII) function and statistics were compiled on the ASCII data. The crossline analysis included 378,859 node comparisons with an average difference of 0.01 meters and standard deviation of 0.034 meters.

B.2.2 Uncertainty

The following survey specific parameters were used for this survey:

Measured	Zoning
0 meters	0.074 meters

Table 6: Survey Specific Tide TPU Values

Hull ID	Measured - CTD	Measured - MVP	Surface
R/V Westerly	1.000 meters/second	1.000 meters/second	0.500 meters/second

Table 7: Survey Specific Sound Speed TPU Values

Additional discussion of these parameters is included in the DAPR.
During surface finalization in HIPS, the "greater of the two" option was selected, where the calculated uncertainty from total propagated uncertainty (TPU) is compared to the standard deviation of the soundings influencing the node, and where the greater value is assigned as the final uncertainty of the node. The uncertainty of the finalized surface increased for nodes where the standard deviation of the node was greater than the total propagated uncertainty. The resulting calculated uncertainty values of all nodes in the finalized surfaces range from 0.19 meters to 0.38 meters with a standard deviation of 0.005 meters. The maximum uncertainty value is located along the edge of what appears to be a historic dredged area. The high standard deviation in the depth surface results from gridding data over this steeply sloping feature.
To determine if surface grid nodes met International Hydrographic Organization (IHO) Order 1 specification, a ratio of the final node uncertainty to the allowable uncertainty at that depth was determined. As a percentage, this value represents the amount of error budget utilized by the uncertainty value at each node.
For the 4-meter surface the allowable uncertainty utilized ranges from 35% to 75%. The average allowable uncertainty for the surface is 37% with a standard deviation of 0.009. There are no values exceeding 100% which indicates that all nodes meet specification.

B.2.3 Junctions

Survey H12528 junctions with H12529 from project OPR-J348-KR-13 and with two prior NOAA surveys. Bathymetric Attributed Grids (BAGs) of these prior surveys were downloaded from NOAA's National Geophysical Data Center (NGDC) website for comparison.
A 4-meter finalized H12528 surface, with no depth thresholds applied, was compared to the prior surveys by generating difference surfaces with CARIS Bathy DataBASE. The H12528 surface with no depth thresholds applied was created for quality control purposes and has not been submitted.

The following junctions were made with this survey:

Registry Number	Scale	Year	Field Unit	Relative Location
H11514	1:40000	2005	NOAA Ship Thomas Jefferson	NW
H11545	1:40000	2006	Terrasond, Ltd.	NE
H12529	1:40000	2013	David Evans and Associates, Inc.	E

Table 8: Junctioning Surveys

H11514

In total 56,749 overlapping nodes were compared with differences ranging from -0.866 meters (H12528 shoaler than prior) to 5.541 meters (H12528 deeper than prior). The average difference was -0.012 meters with a standard deviation of 0.134 meters. The maximum difference of 5.541 meters occurred over an area with questionable gridded depths in the H11514 surface which were possibly caused by depth fliers in the prior survey.

H11545

In total 119,025 overlapping nodes were compared with differences ranging from -0.200 meters (H12528 shoaler than prior) to 0.404 meters (H12528 deeper than prior). The average difference was 0.06 meters with a standard deviation of 0.073 meters.

H12529

At the time of writing, junction analysis with OPR-J348-KR-13 survey H12529 had not been completed. Junction analysis between H12528 and H12529 will be discussed in the H12529 Descriptive Report.

B.2.4 Sonar QC Checks

Quality control is discussed in detail in Section B of the DAPR. The results from the positioning system comparison and bar-to-multibeam comparison are included in Separate I Acquisition and Processing Logs.

The sound velocity profile (SVP) sensor weekly evaluation table can be found in Separate II Sound Speed Data of this report.
Multibeam data were reviewed at multiple levels of data processing including: CARIS HIPS conversion, subset editing, and analysis of anomalies revealed in CUBE surfaces. Submerged significant features identified during survey operations were noted in the acquisition logs, saved to Isis cursor log files, and then displayed during HIPS editing to act as a check during feature compilation. In addition to the field interpretation of side scan contacts, two independent post-processing reviews of the side scan data were conducted, and all significant contacts or potentially significant contacts tracked in a custom database.

B.2.5 Equipment Effectiveness

Exist

As discussed in the DAPR, results of routine roll tests were added to the project vessel file to account for a minor instability of the mulitbeam mount.

B.2.6 Factors Affecting Soundings

There were no other factors that affected corrections to soundings.

B.2.7 Sound Speed Methods

Sound Speed Cast Frequency: Approximately 15-minute intervals.

An ODOM Brooke Ocean Technologies' MVP30 and a SeaBird Electronics SEACAT SBE-19 Conductivity, Temperature, and Depth (CTD) profiler were the primary instruments used to acquire sound speed readings during multibeam operations. Moving vessel profiler (MVP) sound speed readings were measured at approximately 15-minute intervals during survey operations. Additional discussion of sound speed methods can be found in the DAPR.

B.2.8 Coverage Equipment and Methods

Survey speeds were maintained to meet or exceed along track coverage requirements throughout the survey. Demonstration of 200% side scan sonar coverage was achieved by producing two separate 100% 1-meter resolution mosaics. Mosaics were thoroughly reviewed for holidays and areas of poor quality coverage due to biomass, vessel wakes, or other factors. A fill plan was created in order to acquire side scan data where holidays and significant poor quality coverage existed.
Multibeam data were acquired in conjunction with side scan sonar collection. A fill plan was created for all multibeam holidays greater than three nodes along track that extended across the entire swath. This requirement corresponds to the along track holiday specification in the 2012 HSSD (Section 5.2.2.3). Significant side scan sonar contacts were developed with multibeam sonar to obtain a least depth of the contact using multibeam object detection coverage requirements.

B.2.9 Density

The sounding density requirement of 95% of all nodes, populated with at least three soundings per node, was verified by exporting the density child layer of each CUBE surface to an ASCII text file and compiling statistics on the density values. More than 99.6% of all final CUBE surface nodes contained three or more soundings. Density statistics of an individual item investigation surface using Object Detection requirements was reviewed and surpassed the 95% requirement.

B.3 Echo Sounding Corrections

B.3.1 Corrections to Echo Soundings

Data reduction procedures for survey H12528 are detailed in the DAPR. The multibeam summary processing log is included Separate I Acquisition and Processing Logs of this report.

B.3.2 Calibrations

No additional calibration tests were conducted beyond those discussed in the DAPR.

B.4 Backscatter

Multibeam backscatter was logged in Hypack 7K format and included with the H12528 digital deliverables. Data were processed periodically in CARIS HIPS to evaluate backscatter quality but the processed data is not included with the deliverables.

B.5 Data Processing

B.5.1 Software Updates

There were no software configuration changes after the DAPR was submitted.

The following Feature Object Catalog was used: 5.3.2

B.5.2 Surfaces

The following surfaces and/or BAGs were submitted to the Processing Branch:

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H12528_MB_4m_MLLW	CUBE	4.0 meters	0 meters - 40 meters	NOAA_4m	Set Line Spacing Coverage
H12528_MB_50cm_MLLW	CUBE	0.5 meters	0 meters - 22 meters	NOAA_0.5m	Object Detection Coverage
H12528_100Percent	Mosaic	1.0 meters	-	N/A	First 100-percent coverage
H12528_200Percent	Mosaic	1.0 meters	-	N/A	Second 100-percent coverage

Table 9: Submitted Surfaces

Bathymetric grids were created relative to Mean Lower Low Water (MLLW) in CUBE format using set line spacing and object detection resolution requirements as described in the NOS HSSD (April 2013). Depth thresholds were applied during surface finalization as defined in the NOS HSSD (April 2013).
The 50-centimeter surface includes data at object detection resolution for a significant feature investigated with multibeam. In addition, a field sheet and surface was submitted for this investigation with the name of the investigation field sheet corresponding to the primary side scan sonar contact name. The least depth for the significant contact investigation was added to the final surface with a designated sounding. Additional designated soundings were added to depth surfaces as necessary in order to accurately represent the seafloor in accordance with the NOS HSSD.

C. Vertical and Horizontal Control

A complete description of the horizontal and vertical control for survey H12528 can be found in the OPR-J348-KR-13 Horizontal and Vertical Control Report (HVCR), submitted under separate cover. A summary of horizontal and vertical control for this survey follows.

C.1 Vertical Control

The vertical datum for this project is Mean Lower Low Water.

Standard Vertical Control Methods Used:

Discrete Zoning

The following National Water Level Observation Network (NWLON) stations served as datum control for this survey:

Station Name	Station ID
Pascagoula NOAA Lab, MS	874-1533

Table 10: NWLON Tide Stations

File Name	Status
8741533.tid	Verified Observed

Table 11: Water Level Files (.tid)

File Name	Status
OPSREVISED_J348KR2013CORP	Final

Table 12: Tide Correctors (.zdf or .tc)

C.2 Horizontal Control

The horizontal datum for this project is North American Datum of 1983 (NAD83).

The projection used for this project is NAD83 UTM Zone 16 North.

During survey operations, some Differential Global Positioning System (DGPS) outages from the primary beacon (293 kHz) occurred. The system was set up to automatically switch to the secondary beacon (295 kHz) when the primary signal was lost.

The following DGPS Stations were used for horizontal control:

DGPS Stations
English Turn, Louisiana (293 kHz)
Eglin, Florida (295 kHz)

Table 13: USCG DGPS Stations

D. Results and Recommendations

D.1 Chart Comparison

The majority of the chart comparison was performed by comparing H12528 depths to a digital surface generated from electronic navigational charts (ENCs) covering the survey area. A 50-meter product surface was then generated from a triangular irregular network (TIN) created from the soundings, depth contours, and depth features for each ENC scale. An additional 50-meter HIPS product surface of the entire survey area was generated from the finalized 4-meter CUBE surface. The chart comparison was conducted by creating and reviewing the resultant difference surface.
The raster chart comparison was performed by comparing the raster navigational charts (RNCs) covering the survey area to the corresponding ENCs which were subsequently compared to H12528 using difference surface techniques.
The electronic and raster versions of the relevant charts used during the comparison were reviewed to ensure that all USCG Local Notice to Mariners (LNM) issued during survey acquisition, impacting the survey area, were applied and addressed by this survey.

D.1.1 Raster Charts

The following are the largest scale raster charts, which cover the survey area:

Chart	Scale	Edition	Edition Date	LNM Date	NM Date
11363	1:80000	44	02/2013	09/24/2013	10/05/2013
11373	1:80000	50	08/2012	09/24/2013	10/05/2013
11366	1:250000	15	08/2012	09/24/2013	10/05/2013

Table 14: Largest Scale Raster Charts

11363

Chart 11363 was compared to US4LA34M within the H12528 survey area. No differences between the raster navigational chart (RNC) and ENC were observed. Charted differences determined by comparing surveyed depths to a digital surface of US4LA34M are discussed in Section D.1.2.

11373

Chart 11373 was compared to US4LA34M and US4MS12M within the H12528 survey area. No differences between the RNC and ENC were observed other than minor differences in the placement of some soundings and contours. Charted differences determined by comparing surveyed depths to a digital surface of US4MS12M are discussed in Section D.1.2.

11366

Chart 11366 corresponds to chart US3GC04M within the H12528 survey area. No differences between the RNC and ENC were observed. Charted differences in this area determined by comparing surveyed depths to a digital surface of US3GC04M are discussed in Section D.1.2.

D.1.2 Electronic Navigational Charts

The following are the largest scale ENCs, which cover the survey area:

ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US4LA34M	1:80000	28	05/01/2012	09/25/2013	NO
US4MS12M	1:80000	21	11/09/2012	10/29/2013	NO
US3GC04M	1:250000	49	04/05/2012	10/30/2013	NO

Table 15: Largest Scale ENCs

US4LA34M

Charts US4LA34M and US4MS12M, which are of the same scale and both cover the survey area, were merged prior to chart comparison. With the exception of significant changes at the northern end of the Chandeleur Islands surveyed depths from H12528 are generally 3 feet shoaler to 5 feet deeper than charted. There are areas that are up to 25 feet shoaler than charted and 15 feet deeper than charted at the northern end of the Chandeleur Islands. H12528 Dangers to Navigation (DtoNs) 1 and 2 were submitted to identify this area of shoaling. The chart was only updated with a series of shoal soundings from DtoN 1 which are unable to accurately depict the extent of the change in this area.

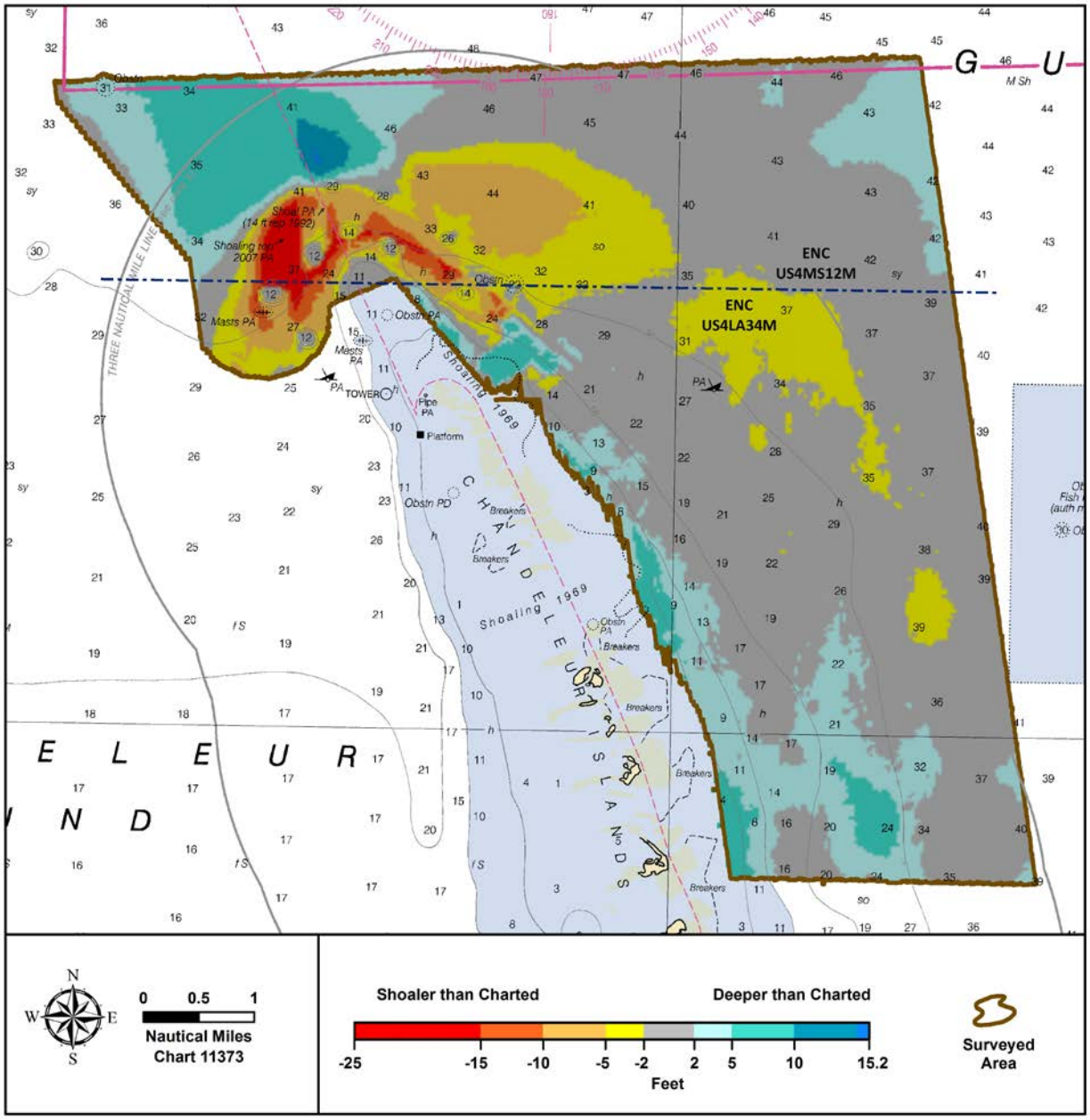


Figure 4: Depth Difference between H12528 and charts US4LA34M and US4MS12M

US4MS12M

The chart comparison with ENC US4MS12M was previously discussed with ENC US34LAM.

US3GC04M

As with the large scale charts there are considerable differences of up to three fathoms between surveyed depths and the small scale chart along the northern end of the Chandeleur Islands. Surveyed depths are generally one fathom shoaler to one fathom deeper than charted over the remainder of the survey area.

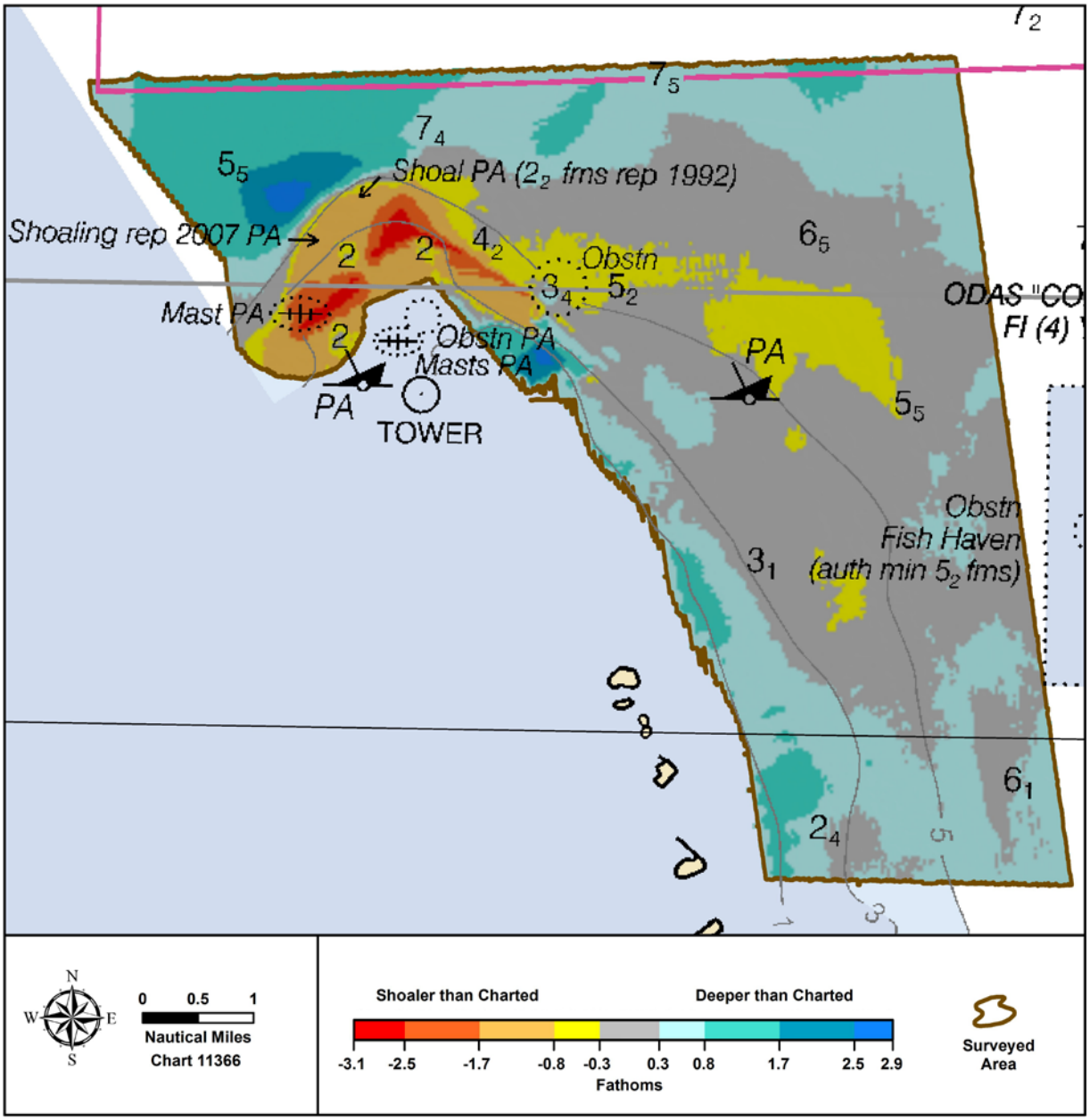


Figure 5: Depth Difference between H12528 and chart US3GC04M

D.1.3 AWOIS Items

Three (3) AWOIS items were assigned for investigation within the survey H12528 area.

AWOIS Item #7311 is listed as a sounding in the AWOIS database with no other supporting information on this item. A 43-foot sounding is charted on the largest scale chart (US4MS12M / 11373) at the location of AWOIS #7311. Surveyed soundings within the 200-meter AWOIS search radius range from 34 feet to 40 feet. No side scan sonar contacts were located within the search radius. AWOIS #7311 has been disproved by 200% side scan coverage and has been included in the Final Feature File as a $CSYMB object with a description of 'Delete'. It is recommended that the AWOIS database be updated with findings from the H12528 survey.
AWOIS Item #14960 is charted (US4LA34M/11363/11373) as a wreck Position Approximate (PA) showing mast/ masts. Five (5) insignificant side scan sonar contacts were investigated with multibeam sonar within the 1000 meter search radius; none showing evidence of a wreck. Survey H12528 has disproved this item with 200% side scan coverage. It is recommended that the AWOIS database be updated with findings from the H12528 survey. The charted wreck representing AWOIS #14960 as depicted in the Composite Source File (CSF) has been included in the Final Feature File with a description of 'Delete'.
AWOIS Item #15030 is charted (US4LA34M/11363/11373) as a wreck PA showing any portion of hull or superstructure. Multibeam sonar investigations were run on two insignificant side scan contacts observed just outside of the 200-meter search radius but no evidence of a wreck was observed. Survey H12528 has disproved this item with 200% side scan coverage. It is recommended that the AWOIS database be updated with findings from the H12528 survey. The charted wreck representing AWOIS #15030 as depicted in the CSF has been included in the Final Feature File with a description of 'Delete'.

D.1.4 Maritime Boundary Points

No Maritime Boundary Points were assigned for this survey.

D.1.5 Charted Features

There are two charted features labeled as PA within the H12528 survey area. These features correspond to AWOIS #14960 and #15030 which have been previously discussed.
There is also one Shoal PA note and one Shoaling reported PA note in the vicinity of the observed shoaling at the northern end of the Chandeleur Islands. The hydrographer recommends that these notes be removed when the results of this survey are applied to the charts.
The survey area does not contain any submerged charted features labeled as Position Doubtful (PD) or Existence Doubtful (ED). Charted features assigned in the CSF are included in the H12528 File Feature File and denoted with the Assignment Flag of 'Assigned'.

D.1.6 Uncharted Features

A new uncharted obstruction, submitted as H12528 DtoN 3, is discussed in Section D.1.7.

D.1.7 Dangers to Navigation

Three (3) DtoNs were reported for this survey and have been submitted to the Atlantic Hydrographic Branch (AHB).
H12528 DtoNs 1 and 2 were submitted as a selection of shoal soundings which delineated shoaling at the northern end of the Chandeleur Islands. This shoaling is fully represented in the H12528 bathymetric surfaces included with the survey deliverables. DtoN 1 has been applied to the charts while DtoN 2 has not. H12528 DtoN 3, which has been applied to the charts, is included in the Final Feature File. DtoN 3 appears to be the remains of the Chandeleuer Island Lighthouse which was destroyed during Hurricane Katrina in 2005. Email correspondence with the Central Gulf Coast Navigation Manager on this subject is included in Appendix II.

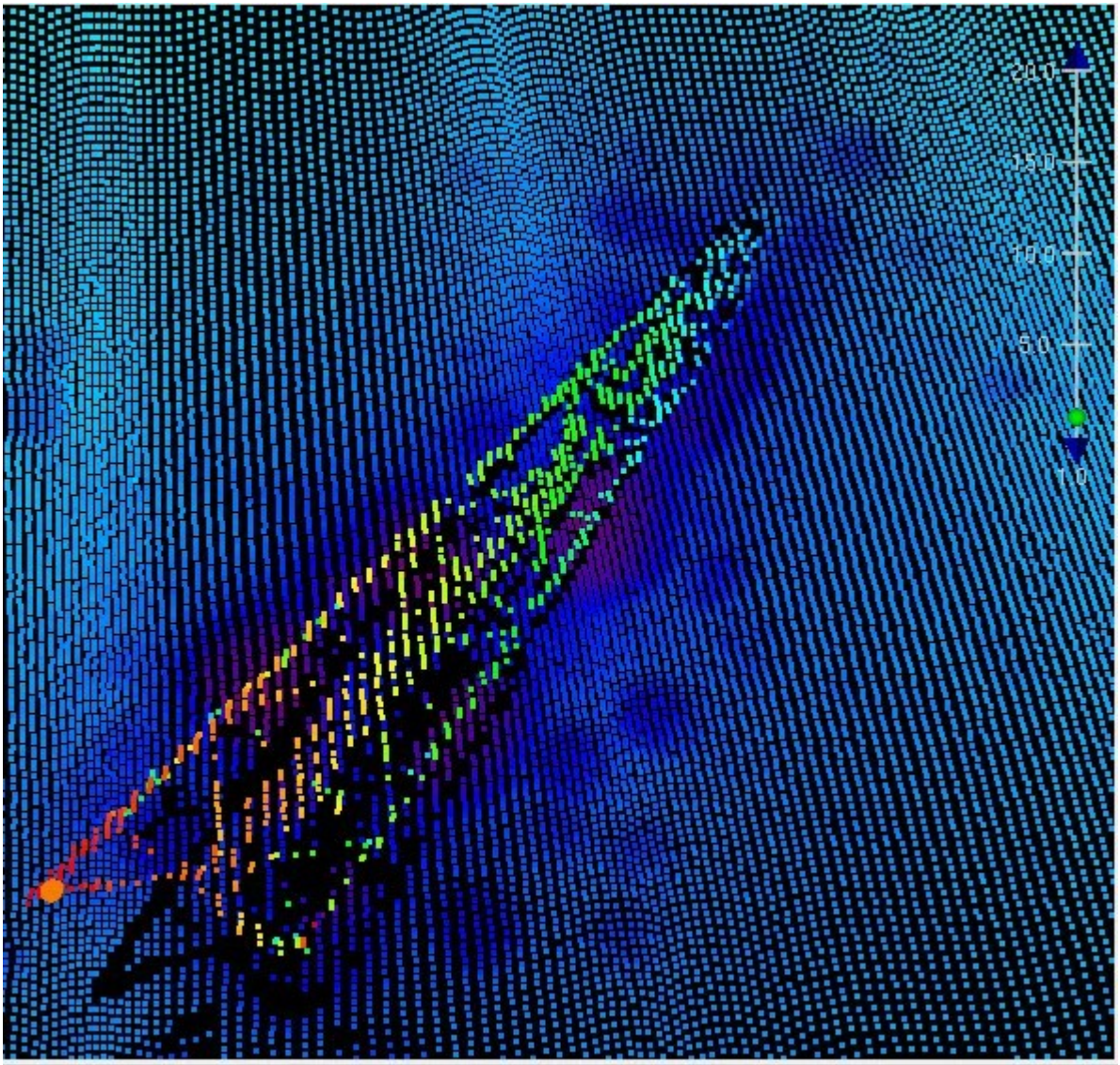


Figure 6: Remains of the Chandeleuer Island Lighthouse

D.1.8 Shoal and Hazardous Features

As previously discussed, significant shoaling was observed along the northern end of the Chandeleur Islands.

D.1.9 Channels

The H12528 survey area does not contain any anchorage areas, maintained navigation channels or channel lines. The northern edge of survey area borders charted safety fairway (33 CFR 166.200).

D.1.10 Bottom Samples

Seven (7) bottom samples were acquired on August 27, 2013 (DN 239). Approximate sample locations were included in the file PRF provided by the Hydrographic Surveys Division. The final sampling plan primarily used the provided locations with some modification of position to better characterize changes in bottom type delineated in the side scan imagery, and to avoid sampling in the vicinity of submerged infrastructure such as pipelines or platforms.

D.2 Additional Results

D.2.1 Shoreline

A limited shoreline investigation was assigned in the OPR-J348-KR-13 Hydrographic Survey Project Instructions. The project CSF included assigned coastline and land area charted features which were inadvertently assigned by HSD staff during the creation of the CSF. An email with HSD staff from March 7, 2013 discussing this issue has been included in the OPR-J348-KR-13 Project Correspondence.
No charted or uncharted baring or shoreline features were located within the H12528 survey area.

D.2.2 Prior Surveys

Aside from previously discussed comparison to junction surveys H11514 and H11545 no other comparisons with prior surveys were conducted.

D.2.3 Aids to Navigation

No Aids to Navigation (AtoNs) were charted or located within the H12528 survey area.

D.2.4 Overhead Features

There were no overhead bridges, cables, or other structures which would impact overhead clearance in the survey area.

D.2.5 Submarine Features

No pipelines were charted or located within the H12528 survey area.

D.2.6 Ferry Routes and Terminals

There were no ferry routes or terminals within the survey area.

D.2.7 Platforms

No platforms were charted or located within the H12528 survey area.

D.2.8 Significant Features

Refraction artifacts were visible in the side scan and multibeam data acquired along the Northern Chandeleur Islands as a result of the large volume of fresh water being released during flood events on the Mississippi and Pearl Rivers. Evidence of this issue was apparent in the sound speed profiles collected during acquisition. Survey operations were discontinued in this area until the rivers returned to a normal stage and the fresh water lens causing the refraction dissipated. There was no additional information of scientific or practical value observed during the survey. There were no unusual submarine features or anomalous tidal or environmental conditions observed during the survey that impacted the quality of the survey or worthy of charting.

D.2.9 Construction and Dredging

There were no construction or dredging activities observed during survey operations. There is evidence of past dredging activity along the western edge of the survey area adjacent to the Chandeleur Islands. This dredging may have been associated with mitigation efforts during the Deepwater Horizon oil spill.

D.2.10 New Survey Recommendations

No new surveys or further investigations are recommended for this area.

D.2.11 New Inset Recommendations

No new insets are recommended for this area.

E. Approval Sheet

As Chief of Party, Field operations for this hydrographic survey were conducted under my direct supervision, with frequent personal checks of progress and adequacy. I have reviewed the attached survey data and reports.

All field sheets, this Descriptive Report, and all accompanying records and data are approved. All records are forwarded for final review and processing to the Processing Branch.

The survey data meets or exceeds requirements as set forth in the NOS Hydrographic Surveys and Specifications Deliverables Manual, Statement of Work, and Hydrographic Survey Project Instructions. These data are adequate to supersede charted data in their common areas. This survey is complete and no additional work is required with the exception of deficiencies noted in the Descriptive Report.

Report Name	Report Date Sent
Data Acquisition and Processing Report	2014-01-17

Approver Name	Approver Title	Approval Date	Signature
Jonathan L. Dasler, PE, PLS, CH	NSPS/THSOA Certified Hydrographer, Chief of Party	01/28/2014	Digitally signed by Jon Dasler DN: cn=Jon Dasler, o=David Evans and Associates, Inc., ou=Marine Services Division, email=jld@deainc.com, c=US Date: 2014.01.28 13:05:23 -08'00'
Jason Creech	Lead Hydrographer	01/28/2014	Digitally signed by Jason Creech DN: cn=Jason Creech, o=David Evans and Associates, Inc., ou=Marine Services Division, email=jasc@deainc.com, c=US Date: 2014.01.28 13:05:52 -08'00'

F. Table of Acronyms

Acronym	Definition
AHB	Atlantic Hydrographic Branch
ASCII	American Standard Code for Information Interchange
AtoN	Aid to Navigation
AWOIS	Automated Wreck and Obstruction Information System
BAG	Bathymetric Attributed Grid
CSF	Composite Source File
CTD	Conductivity Temperature Depth
DAPR	Data Acquisition and Processing Report
DEA	David Evans and Associates, Inc
DGPS	Differential Global Positioning System
DN	Day Number
DtoN	Danger to Navigation
ED	Existence Doubtful
ENC	Electronic Navigational Chart
HIPS	Hydrographic Information Processing System
HSD	Hydrographic Surveys Division
HSSD	Hydrographic Surveys Specifications and Deliverables
HVCR	Horizontal and Vertical Control Report
IHO	International Hydrographic Organization
LNM	Local Notice to Mariners
MBES	Multibeam Echo Sounder
MLLW	Mean Lower Low Water
MVP	Moving Vessel Profiler
nm	Nautical Mile
NAD83	North American Datum of 1983
NGDC	National Geophysical Data Center
NOAA	National Oceanic and Atmospheric Administration
NSPS	National Society of Professional Surveyors
NWLON	National Water Level Observation Network
PA	Position Approximate
PD	Position Doubtful

Acronym	Definition
PE	Professional Engineer
PLS	Professional Land Surveyor
PRF	Project Reference File
QC	Quality Control
RNC	Raster Navigational Chart
SSS	Side Scan Sonar
SVP	Sound Velocity Profiler
TIN	Triangular Irregular Network
TPU	Total Propagated Uncertainty
USCG	United Stated Coast Guard

APPENDIX I

TIDES AND WATER LEVELS

Project: OPR-J348-KR-13 Registry No: H12528
Contractor Name: David Evans and Associates, Inc.
Date: October 16, 2013
Sheet Number: 1
Inclusive Dates: March 15, 2013- October 16, 2013

Time (UTC)

Day Number	Date	Start Time	End Time
74	03/15/2013	16:25:26	20:25:00
76	03/17/2013	12:00:10	21:13:43
77	03/18/2013	12:03:03	21:14:51
86	03/27/2013	13:17:51	20:59:13
87	03/28/2013	11:41:55	21:06:34
88	03/29/2013	11:49:34	21:01:32
89	03/30/2013	11:51:59	21:07:50
91	04/01/2013	11:56:46	20:57:40
96	04/06/2013	12:11:02	20:58:45
97	04/07/2013	11:50:23	21:10:37
105	04/15/2013	19:24:27	20:49:44
114	04/24/2013	12:08:14	14:23:43
117	04/27/2013	12:45:25	22:19:17
118	04/28/2013	14:00:59	22:38:54
119	04/29/2013	11:46:07	21:34:34
120	04/30/2013	11:43:48	16:06:42
127	05/07/2013	11:48:11	20:43:07
128	05/08/2013	12:52:42	21:17:11
163	06/12/2013	12:06:32	21:15:59
191	07/10/2013	12:12:42	20:55:11
193	07/12/2013	12:18:15	20:52:42
194	07/13/2013	12:09:06	19:27:58
207	07/26/2013	11:53:27	20:51:42
210	07/29/2013	11:46:31	20:55:49
211	07/30/2013	11:55:34	20:18:27
214	08/02/2013	12:06:49	15:20:20
215	08/03/2013	14:25:32	21:19:49
216	08/04/2013	12:16:18	12:28:51
219	08/07/2013	12:05:38	21:03:41
220	08/08/2013	12:13:39	20:47:40
287	10/14/2013	19:01:08	20:42:53
289	10/16/2013	11:56:14	14:42:07

H12528

FINAL TIDE NOTE and FINAL TIDE ZONING CHART

DATE: October 16, 2013

PROCESSING BRANCH: Atlantic Hydrographic Branch

HYDROGRAPHIC PROJECT: OPR-J348-KR-13

HYDROGRAPHIC SHEET: H12528

LOCALITY Approaches to Mississippi Sound, Mississippi

SUB-LOCALITY: Vicinity of North Chandeleur Islands

TIME PERIOD:

March	15,17-18,27-30
April	1,6-7,15,24,27-30
May	7-8
June	12
July	10,12-13,26,29-30
August	2-4,7-8
October	14,16

TIDE STATIONS USED: 8741533, Pascagoula NOAA Lab, MS
Lat. 30° 22.0 N, Lon. 88° 33.7' W

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

HEIGHT OF MEAN HIGH WATER (8741533) ABOVE PLANE OF REFERENCE: 0.440 meters [1]

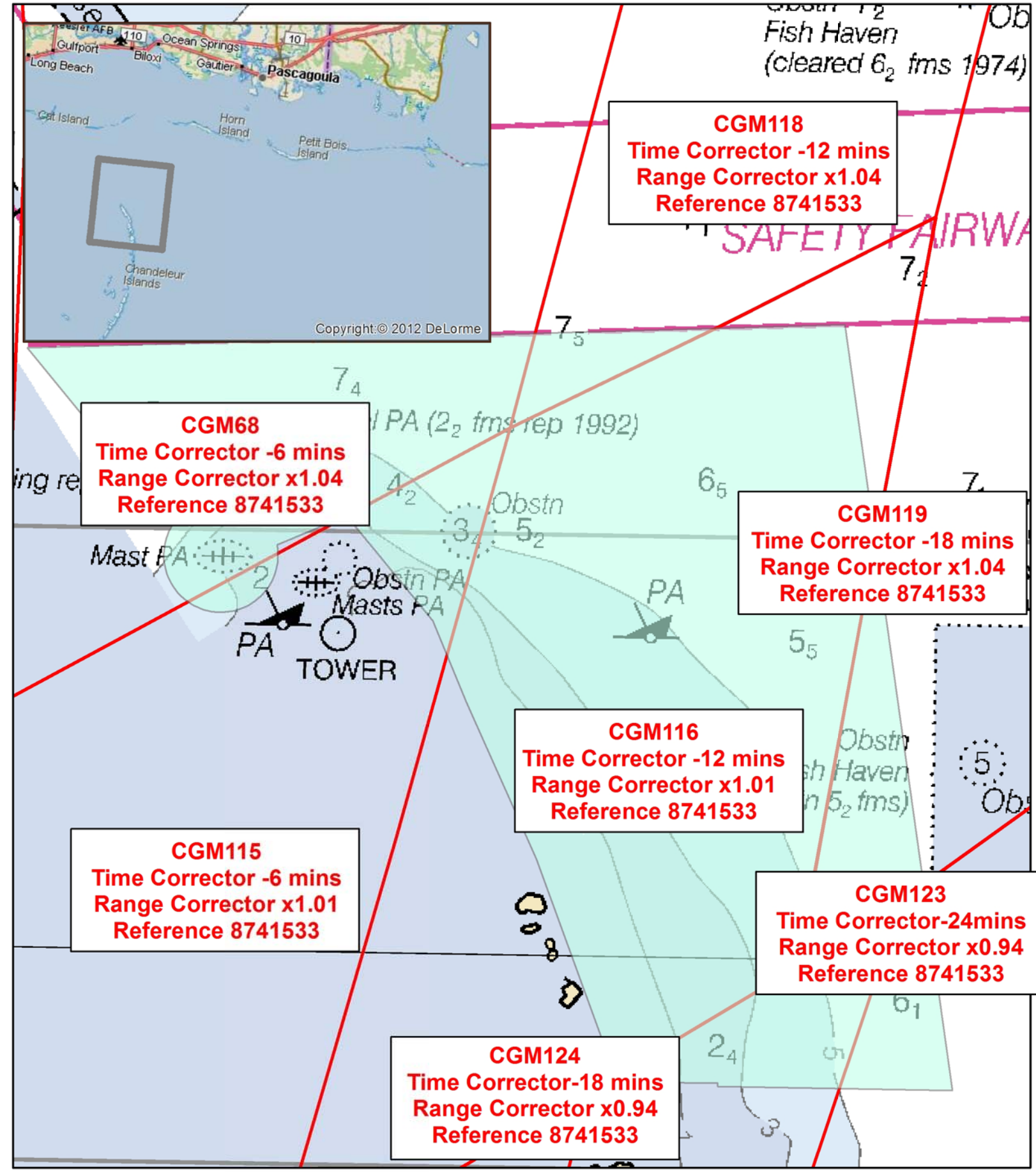
[1] MLLW 6.674m Mean Lower-Low Water
MHW 7.114m Mean High Water

http://tidesandcurrents.noaa.gov/datums.html?units=1&epoch=0&id=8741533&name=Pascagoula+Noaa+Lab&state=MS

FINAL TIDE ZONING
H12528
OPR-J348-KR-13

Zone	Time Corrector (Mins)	Range Ratio	Reference Station
CGM115	-6	1.01	8741533
CGM116	-12	1.01	8741533
CGM118	-12	1.04	8741533
CGM119	-18	1.04	8741533
CGM123	-24	0.94	8741533
CGM124	-18	0.94	8741533
CGM68	-6	1.04	8741533

NOTE: Final soundings were reduced to chart datum using a revised version of the zoning scheme that was originally provided with the tides project instructions. HSD Operations Branch revised the zoning by adding a new zone (OPS001) so that the zoning scheme would fully encompass the project area.



N
W E
S

0 0.5 1
Nautical Miles

H12528
Final Tide Zoning

OPR-J348-KR-13
Approaches to Mississippi Sound, MS
David Evans and Associates, Inc.
Jon Dasler, Lead Hydrographer
Chart 11366

APPENDIX II

SUPPLEMENTAL SURVEY RECORDS AND CORRESPONDENCE

Jason Creech

From: Corey Allen - NOAA Federal <corey.allen@noaa.gov>
Sent: Friday, November 08, 2013 12:35 PM
To: Jason Creech; Jon Dasler
Cc: Mark Lathrop - NOAA Federal; Michael Gonsalves - NOAA Federal
Subject: J348 / C308 Follow Up

Jason / Jon,
I was able to get in touch with Gene and further discuss the outstanding items from our call.

1. *Should the mosaic be clipped inshore of the inshore limit to exclude unresolved features?* Creating targets for features outside the limits is not required, but if you so desired to create targets for these features and provide remarks Gene recommends the following statement, "Target is a baring features outside the limits of survey to be further resolved by forthcoming RSD imagery". Regardless of whether these features are remarked or not, please leave all available SSS data in the mosaic. AHB is aware of the sheet limits as per PRF and will not provide any negative feedback for unresolved features outside the limits of survey.

2. *How to address SSS holidays that occurred in depths outside the limits of required coverage obtained in order to fully resolve AWOIS #14960?* As per your call, these holidays only exist as a function of the minimum altitude requirement and should that requirement be relaxed, usable data exists to fill all holidays. Therefore we are waiving the minimum altitude requirement for data acquired to resolve AWOIS #14960 in the interest of fully resolving the item radius for disproval. Please discuss in the DR the departure from this minimum altitude specification.

Please let me know if you have any additional questions.
--
J. Corey Allen
Operations Branch Team Lead
Hydrographic Surveys Division
Office of Coast Survey, NOAA
Corey.Allen@noaa.gov
301.713.2777 x119 (Office)
301.717.7271 (Cell)

Jason Creech

From: Tim Osborn <tim.osborn@noaa.gov>
Sent: Monday, August 12, 2013 10:11 AM
To: Jason Creech
Cc: Jon Dasler; kelly.lucas@dmr.ms.gov; Miner, Michael D; Walker, Samuel CAPT; Sullivan, Brandon J LCDR; Luis.A.Rodriguez@usace.army.mil; Clark, Karl J MVN; Renee Scholl
Subject: Old Chandeleur Lighthouse- Finding of wrecked sunken tower near Chandeleur Islands- NOAA H12528 DtoN 3 (UNCLASSIFIED)
Attachments: Chandeleur Island Light and Tower.JPG; Chandeleur Island Light and Tower 2.JPG

Jason

I believe you have likely found the old lighthouse. This area and island chain has been decimated and to see it in 28 feet depth of water is really interesting.

It is good that you researched this and thank you.

Tim

-------- Original Message --------
Subject: RE: Finding of wrecked sunken tower near Chandeleur Islands- NOAA H12528 DtoN 3 (UNCLASSIFIED)
Date: Mon, 12 Aug 2013 09:43:43 -0700
From: Jason Creech <Jasc@deainc.com>

The Captain of our boat thinks that this is the remains of the Chandeleur Island Light which was destroyed by Hurricane Katrina. The light was 31 m high which is similar to the dimensions we measured from our multibeam data. Our data also shows a column running down the middle of the structure like the Light.

http://en.wikipedia.org/wiki/Chandeleur_Island_Light

Jason Creech

From: Tim Osborn <tim.osborn@noaa.gov>
Sent: Monday, August 12, 2013 1:35 PM
To: Jason Creech
Cc: Jon Dasler; Kenneth Graham; Kelly.Lucas@dmr.ms.gov; Chris Barron Mississippi DMR Shrimp and Crab Bureau; Matthew.Moreland@NOAA.GOV; Danielle Manning; LaDon Swann; 'Stephen Sempier'
Subject: Old Chandeleur Lighthouse- Finding of wrecked sunken tower near Chandeleur Islands- NOAA H12528 DtoN 3 (UNCLASSIFIED)
Attachments: Chandeleur Island Light and Tower 2.JPG; Chandeleur Tower Location and Wrecked Tower 1998.JPG; Chandeleur Tower Location and Wrecked Tower 2004.jpg; Chandeleur Tower Location and Wrecked Tower Pre Katrina Jan 2005.JPG; Chandeleur Tower Location and Wrecked Tower Post Katrina Nov 2005.JPG; Chandeleur Tower Location and Wrecked Tower 2007.JPG

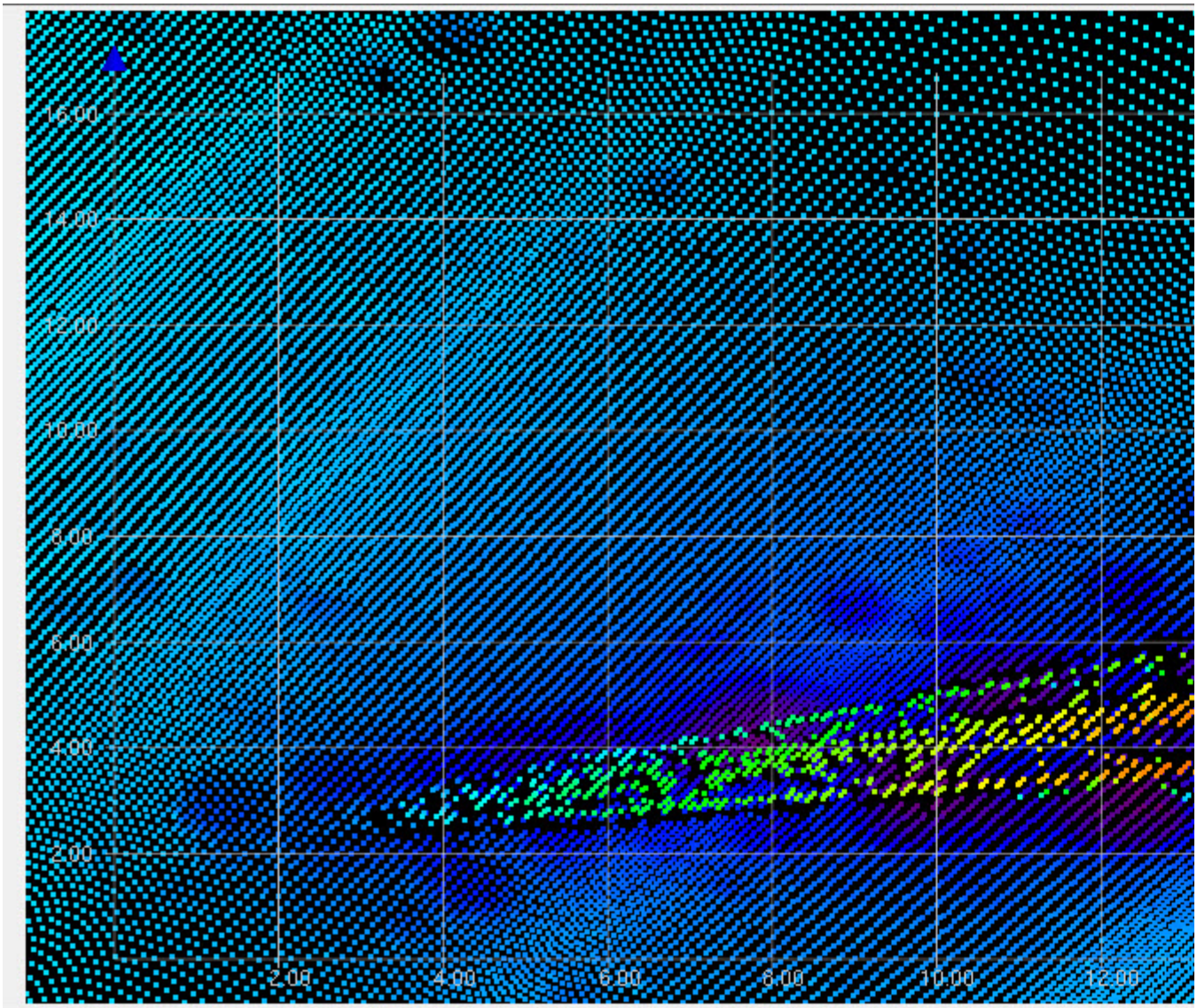
Thanks for the research and surveying that you are doing through this area.

This is a good example of the decimation and movement of an island arc from the various impacts of hurricanes and tropical storms. This being a very old lobe of the coastal Louisiana Mississippi Delta is seen (in the aerial photos of this area of the lighthouse and wrecked tower area) is indicative of the processes being seen elsewhere to the west.

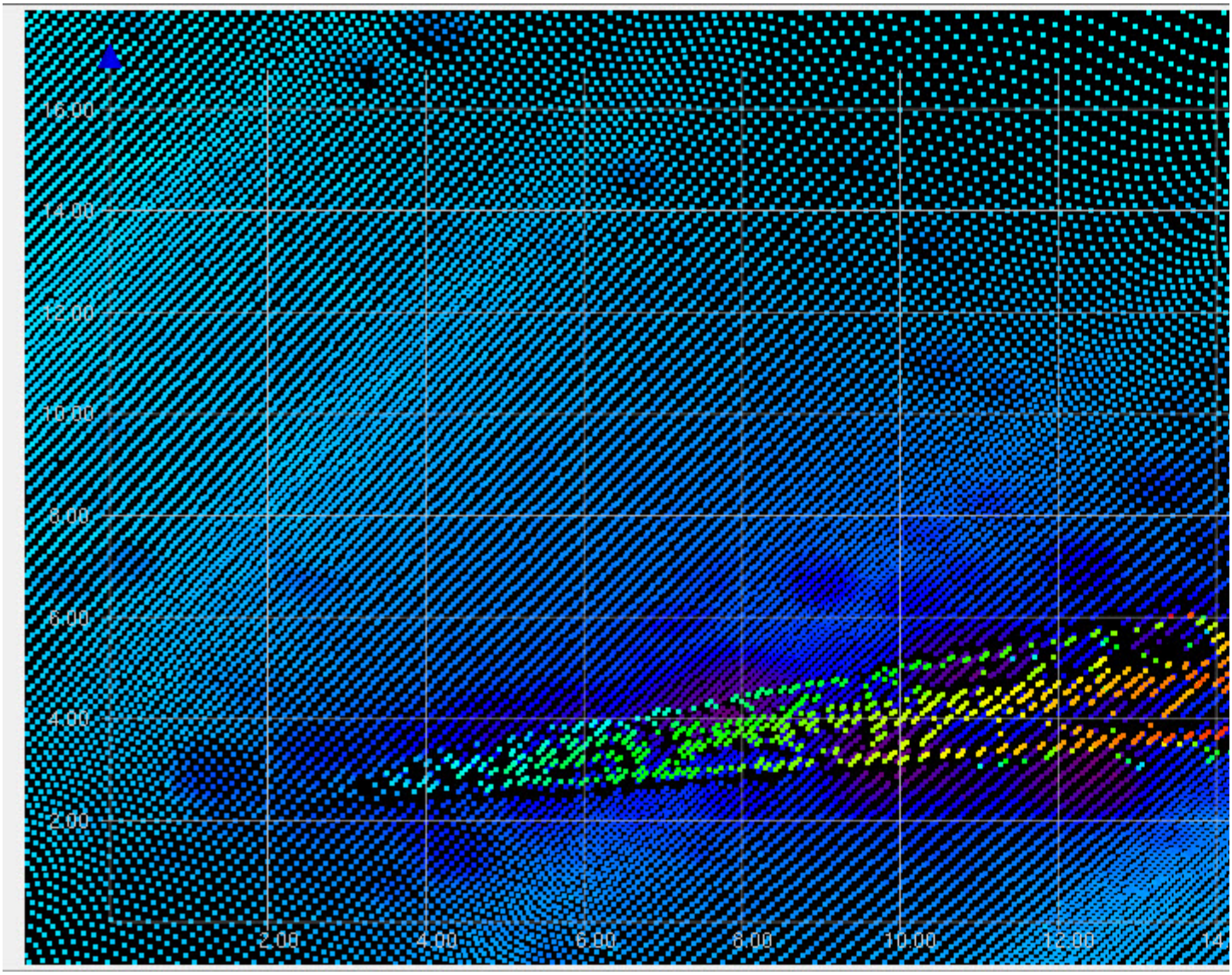
Thanks again. Your survey work to map this important coastal ecosystem is very important.

On 8/12/2013 11:43 AM, Jason Creech wrote:

> The Captain of our boat thinks that this is the remains of the Chandeleur Island Light which was destroyed by Hurricane Katrina. The light was 31 m high which is similar to the dimensions we measured from our multibeam data. Our data also shows a column running down the middle of the structure like the Light.
>
> http://en.wikipedia.org/wiki/Chandeleur_Island_Light



From: tim.osborn [mailto:tim.osborn@noaa.gov]


16.00
14.00
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4.00
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8.00
10.00
12.00

Chandeleur Island Light

From Wikipedia, the free encyclopedia

Coordinates: 30°2'50"N 88°52'41"W

The **Chandeleur Island Light** was a lighthouse established in 1848 near the northern end of the Chandeleur Islands in the Gulf of Mexico, off the east coast of Louisiana. Hurricane Katrina destroyed the light in 2005.

History [edit source | edit beta]

The first light was finished in 1848 with nine lamps in 21 inches (530 mm) reflectors about 55 feet (17 m) above the base. The tower and the keeper's house were destroyed by a hurricane in August 1852.[3]

A second, brick, tower was in operation by 1855, with a focal plane of 50 feet (15 m). By 1865 it had a 4th order Fresnel lens. This tower was the only building on the site that survived the hurricane of October 1, 1893, but it was badly damaged and was taken down. Congress appropriated $35,000 for its replacement.[4]

A new, iron skeleton tower with a 3rd order Fresnel lens (focal plane 102 feet (31 m)) was erected in its place in 1895.[5] The light figured in a case before the United States Supreme Court. After a barge carrying fertilizer ran aground, it was determined that the Coast Guard had been negligent in maintaining the proper operation of the light. The Court held that the United States was liable.[6] The light was added to the National Register of Historic Places in 1986 as **Chandeleur Light**.

Erosion eventually left the tower standing alone in the water, with the last auxiliary building, a keeper's house, destroyed by Hurricane Camille in 1969. The tower was utterly destroyed by Hurricane Katrina in 2005, so that a visit by a research vessel the following spring found not trace of it.[3]

Gallery [edit source | edit beta]

The 1856 brick tower

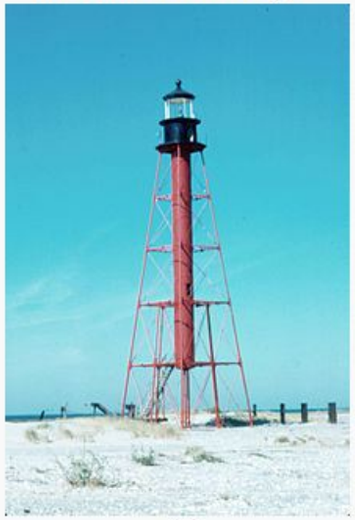
The light in 1960. Note how much more land there is than in 1971.

1971

References [edit source | edit beta]

1. ^ "Historic Light Station Information and Photography: Louisiana". United States Coast Guard Historian's Office.
2. ^ "National Register Information System". *National Register of Historic Places*. National Park Service. 2009-03-13.
3. ^ a b "Chandeleur Island, LA". LighthouseFriends. Retrieved 2013-05-20.
4. ^ (28 Stat. 375)
5. ^ Breton National Wildlife Refuge. Refuge brochure. U.S. Fish & Wildlife Service. August, 2006, p.4.

Chandeleur Island Light



c. 1986

Location	Chandeleur Islands, Gulf of Mexico, Louisiana
Coordinates	30°2'50"N 88°52'41"W
Year first constructed	1848
Year first lit	1896 (most recent tower)
Automated	1966
Deactivated	destroyed by Katrina, 2005
Foundation	Pile
Construction	Iron
Tower shape	Skeletal with cylinder
Markings / pattern	Brown with black lantern
Focal height	102 feet (31 m)
Original lens	3rd order Fresnel lens
Characteristic	various, most recent: Flashing white
Fog signal	none
USCG number	[1]

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The Free Encyclopedia

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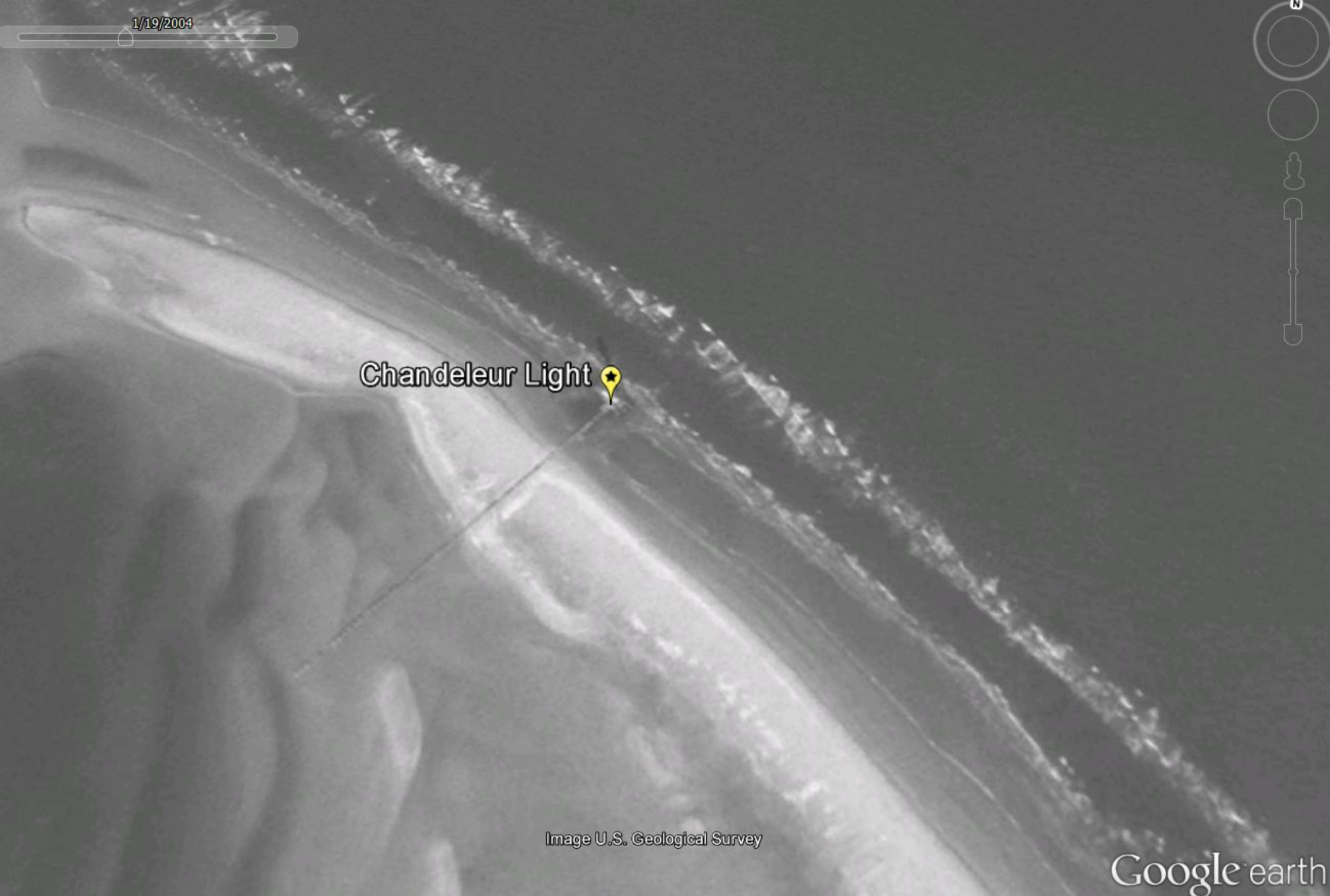
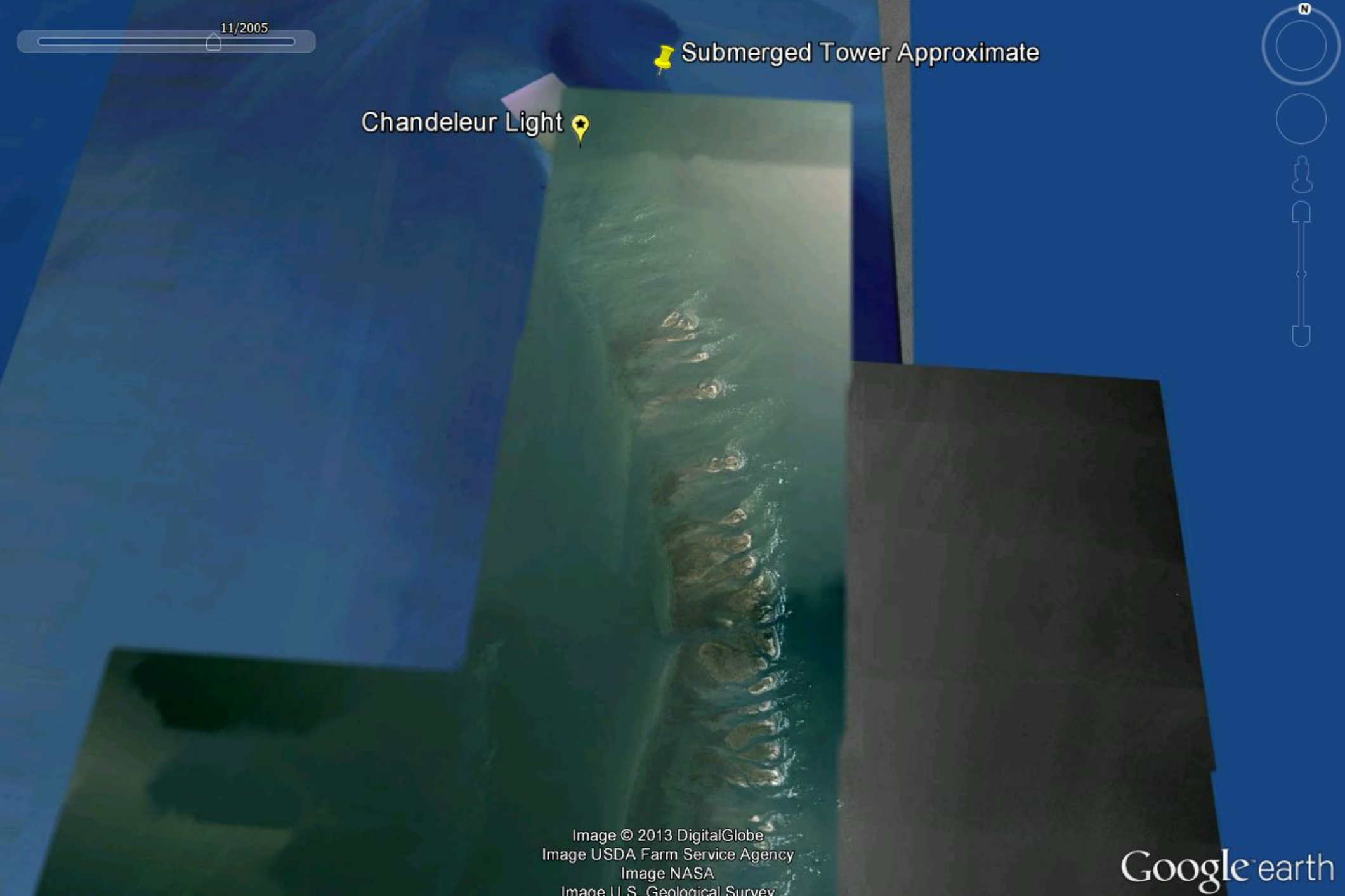
1/23/1998
Chandeleur Light
Image U.S. Geological Survey
Google earth


1/19/2004
Chandeleur Light
Image U.S. Geological Survey
Google earth


8/2007
Submerged Tower Approximate
Chandeleur Light
Image © 2013 DigitalGlobe
Image NASA
Image USDA Farm Service Agency
Google earth


11/2005
Submerged Tower Approximate
Chandeleur Light
Image © 2013 DigitalGlobe
Image USDA Farm Service Agency
Image NASA
Image U.S. Geological Survey
Google earth


1/2005
1989
2013
Submerged Tower Approximate
Chandeleur Light
Image © 2013 DigitalGlobe
Image NASA
Google earth

APPENDIX III

SURVEY FEATURES REPORT

i. DTONS (12)
ii. AWOIS (3)
iii. WRECKS (2) - see AWOIS
iv. Maritime Boundary (0)

H12528 DTON-1

Registry Number: H12528
State: Mississippi
Locality: Approaches to Mississippi Sound
Sub-locality: Vicinity of North Chandeleur Islands
Project Number: OPR-J348-KR-13
Survey Dates: 03/15/2013 - 10/27/2013

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11373	47th	10/01/2008	1:80,000 (11373_1)	[L]NTM: ?
11366	11th	01/01/2008	1:250,000 (11366_1)	[L]NTM: ?
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

Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude
H12528_DTON1_22 ft_ OBSTN	Obstruction	6.66 m	30° 04' 02.0" N	088° 51' 41.3" W

1.1) H12528_DTON1_22 ft_ OBSTN

DANGER TO NAVIGATION

Survey Summary

Survey Position:	30° 04' 02.0" N, 088° 51' 41.3" W
Least Depth:	6.66 m (= 21.85 ft = 3.642 fm = 3 fm 3.85 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2013-300.00:00:00.000 (10/27/2013)
Dataset:	H12528_DTON.000
FOID:	US 0000506331 00001(02260007B9DB0001)
Charts Affected:	11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

OBSTRN/remrks: DtoN #3. Object rising approximately 1.9m above the natural bottom. Feature appears to be the remains of the Chandeleuer Island Lighthouse which was destroyed during Hurricane Katrina in 2005.

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_DTON.000	US 0000506331 00001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

22ft (11373_1)

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

3fm 4ft (11366_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	EXPSOU - 2:shoaler than range of depth of the surrounding depth area
	QUASOU - 6:least depth known
	SORDAT - 20131027

SORIND - US,US,graph,H12528

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

VALSOU - 6.661 m

WATLEV - 3:always under water/submerged

Office Notes

SAR Note: The obstruction was verified using set line spaced MBES and 200% side scan sonar coverage.

COMPILATION: Concur. Feature formerly submitted as 22ft obstruction DTON. Update charted obstruction to reflect least known depth (6.661m) using verified tides and updated position.

Feature Images

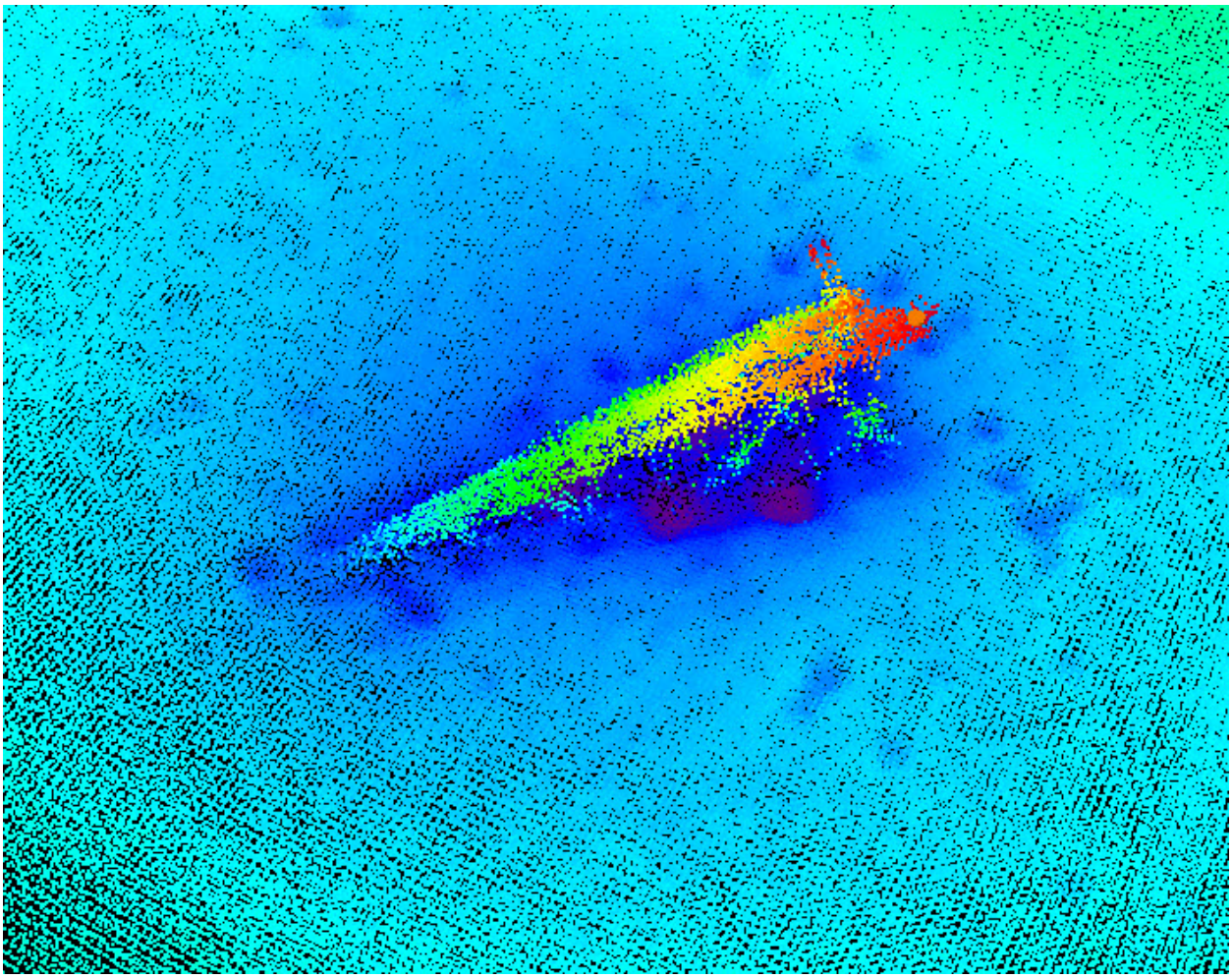


Figure 1.1.1

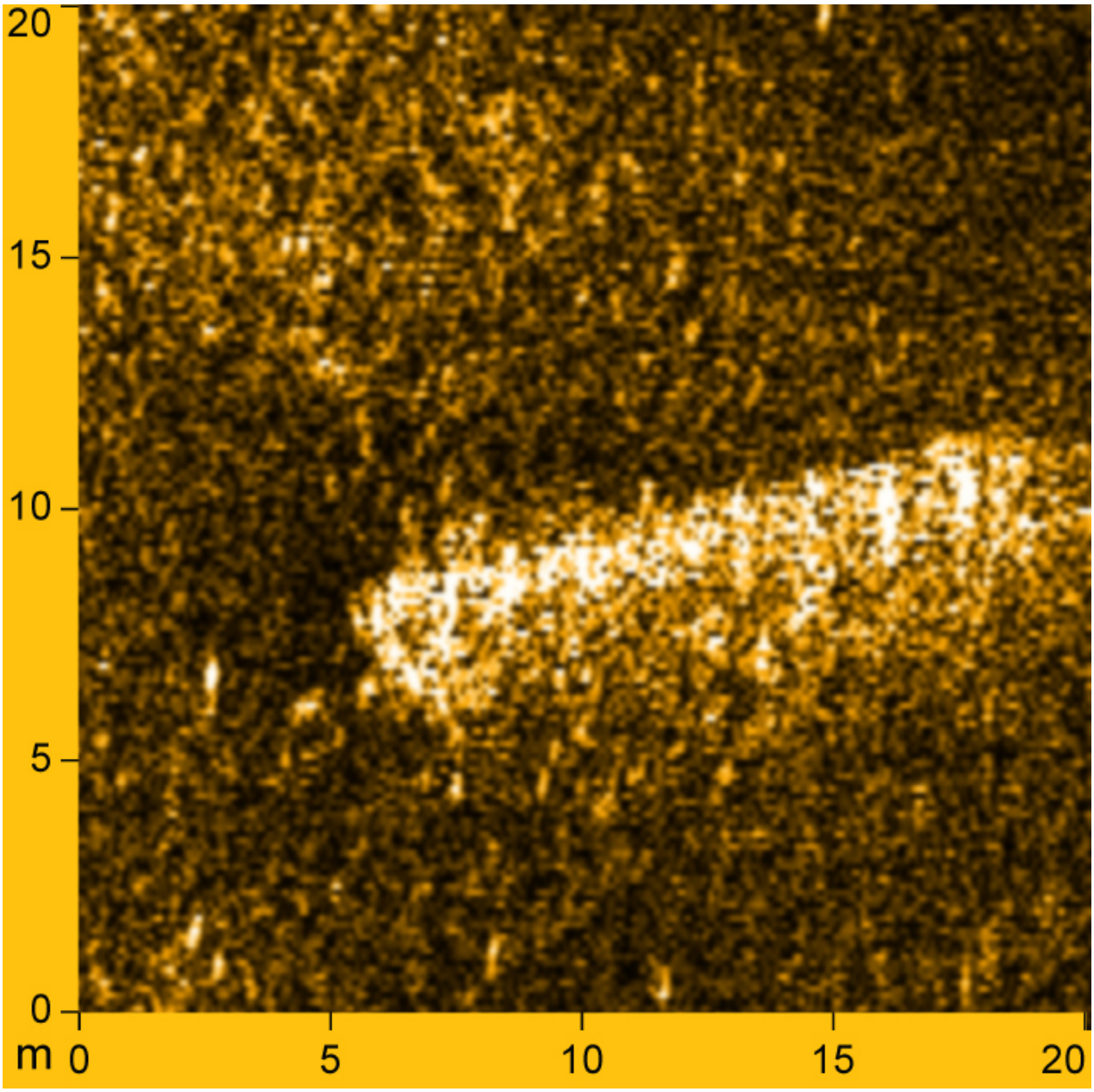


Figure 1.1.2

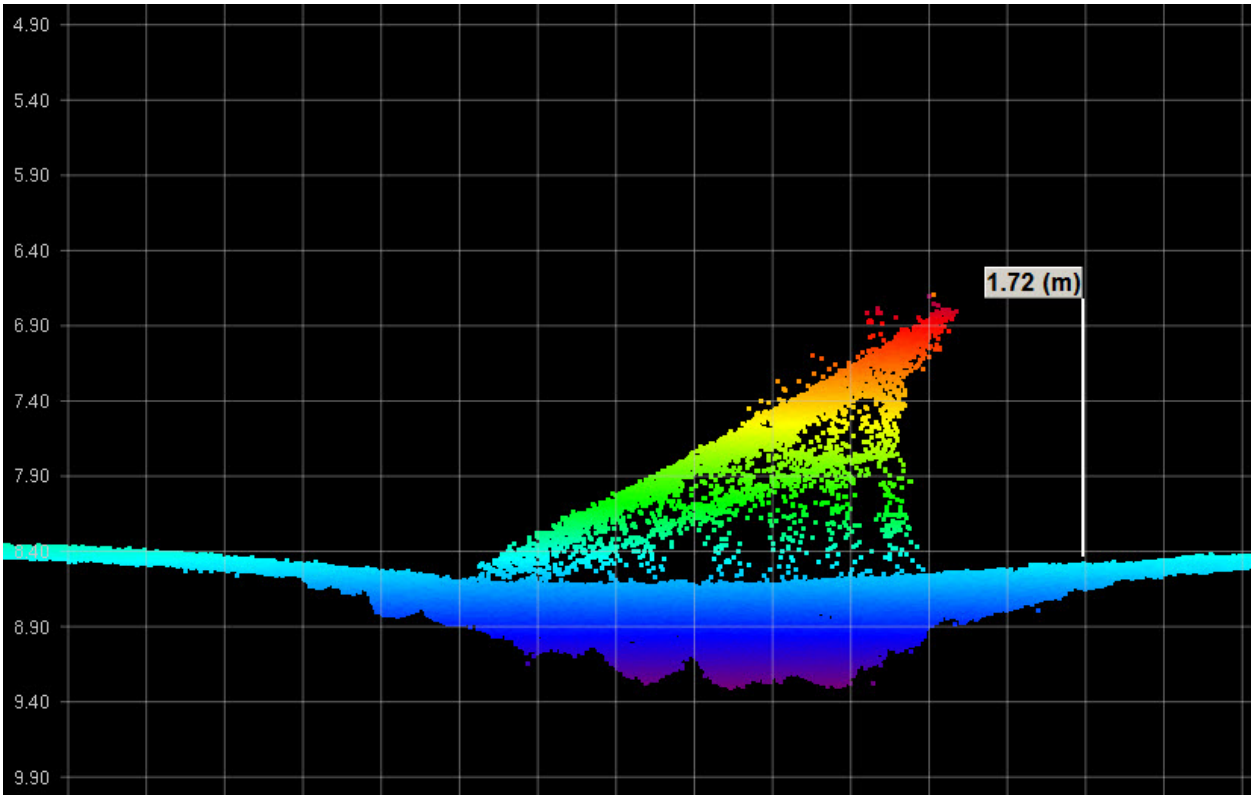


Figure 1.1.3

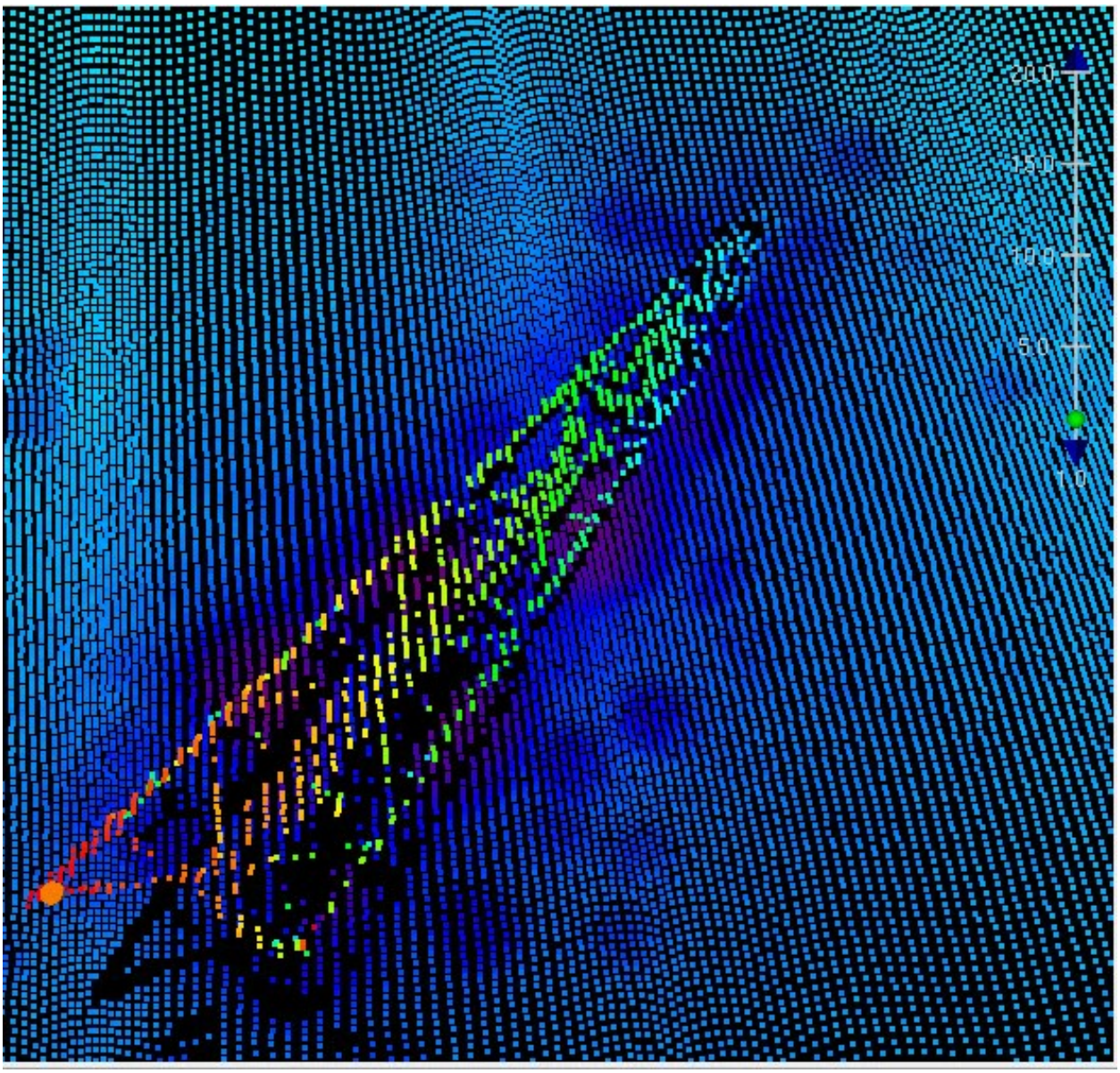


Figure 1.1.4

H12528 DTON Soundings

Registry Number: H12528
State: Mississippi
Locality: Approaches to Mississippi Sound
Sub-locality: Vicinity of North Chandeleur Islands
Project Number: OPR-J348-KR-13
Survey Dates: 03/14/2013 - 10/27/2013

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11363	41st	06/01/2007	1:80,000 (11363_1)	[L]NTM: ?
11373	47th	10/01/2008	1:80,000 (11373_1)	[L]NTM: ?
11366	11th	01/01/2008	1:250,000 (11366_1)	[L]NTM: ?
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
1.1	12ft SOUNDING	Shoal	3.79 m	30° 03' 54.2" N	088° 54' 12.9" W
1.2	12ft SOUNDING	Shoal	3.88 m	30° 03' 31.3" N	088° 53' 50.5" W
1.3	12ft SOUNDING	Shoal	3.80 m	30° 04' 15.2" N	088° 53' 46.4" W
1.4	29ft SOUNDING	Shoal	9.01 m	30° 04' 53.3" N	088° 53' 35.5" W
1.5	14ft SOUNDING	Shoal	4.46 m	30° 04' 28.4" N	088° 53' 25.0" W
1.6	28ft SOUNDING	Shoal	8.75 m	30° 04' 48.6" N	088° 53' 04.1" W
1.7	12ft SOUNDING	Shoal	3.83 m	30° 04' 20.2" N	088° 52' 59.0" W
1.8	36ft SOUNDING	Shoal	11.07 m	30° 04' 59.2" N	088° 52' 39.5" W
1.9	26ft SOUNDING	Shoal	8.12 m	30° 04' 26.1" N	088° 52' 23.3" W
1.10	14ft SOUNDING	Shoal	4.38 m	30° 03' 56.7" N	088° 52' 12.3" W

1.11	34ft SOUNDING	Shoal	10.57 m	30° 04' 52.1" N	088° 52' 08.3" W

1.1) 12ft SOUNDING

DANGER TO NAVIGATION

Survey Summary

Survey Position:	30° 03' 54.2" N, 088° 54' 12.9" W
Least Depth:	3.79 m (= 12.43 ft = 2.072 fm = 2 fm 0.43 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2013-096.00:00:01.000 (04/06/2013)
Dataset:	H12528_DTON_Soundings.000
FOID:	US 0000554981 00001(0226000877E50001/1)
Charts Affected:	11363_1, 11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

SOUNDG/remrks: Shoal soundings submitted by the field unit. Depths were corrected using zoning files supplied by CO-OPS and verified water levels from Pascagoula, MS (874-1533).

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_DTON_Soundings.000	US 0000554981 00001	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

12ft (11363_1, 11373_1)

2fm (1115A_1, 11360_1, 11006_1, 411_1)

2fm 0ft (11366_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20131027
	SORIND - US,US,graph,H12528
	TECSOU - 3:found by multi-beam

Office Notes

SAR Note: The sounding was submitted to MCD by AHB. The sounding is verified using set line spaced coverage MBES data.

Compilation: Concur. Submitted DTON sounding was previously charted, but was not selected as a chart scale sounding during the cartographic process.

Feature Images

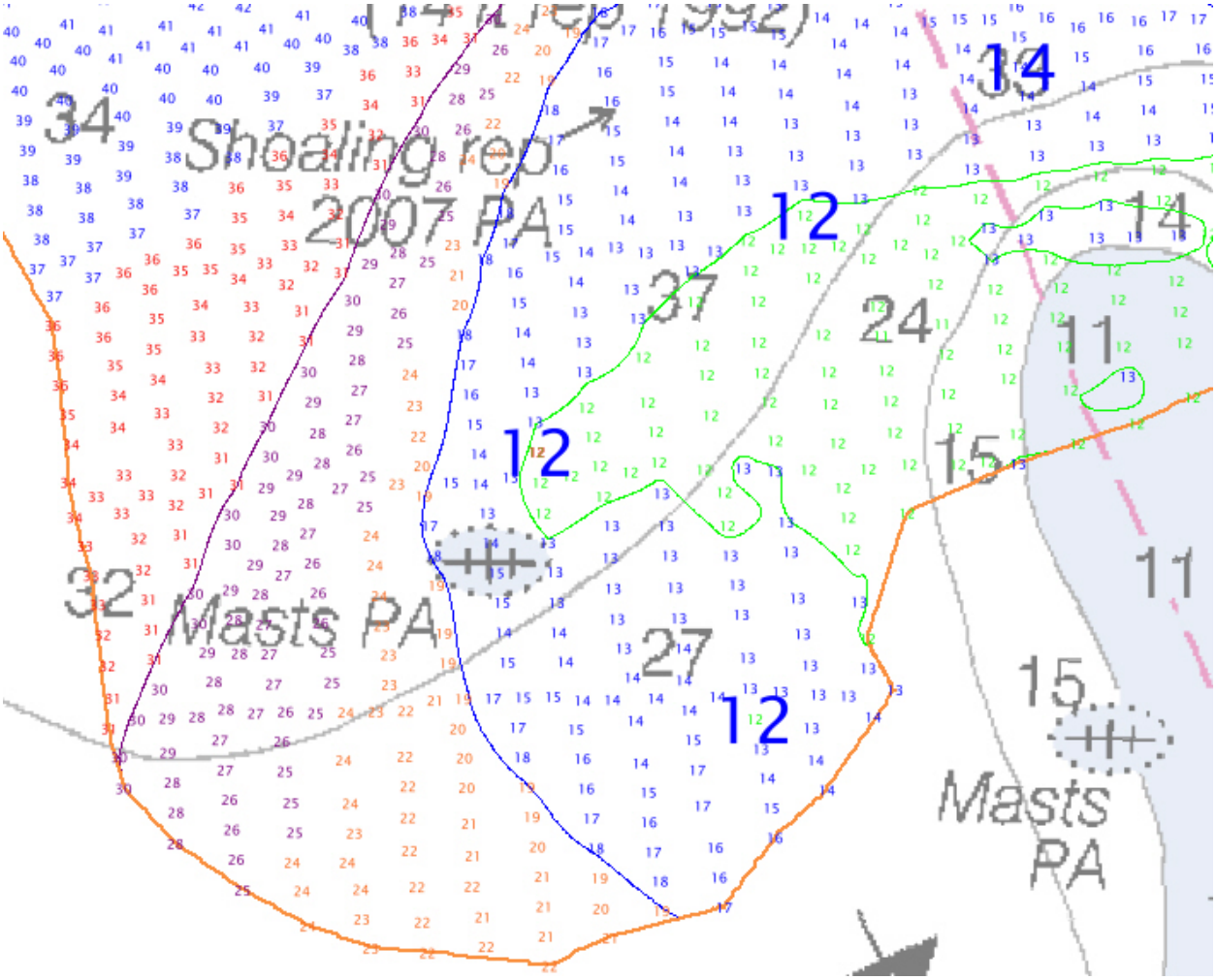


Figure 1.1.1

1.2) 12ft SOUNDING

DANGER TO NAVIGATION

Survey Summary

Survey Position:	30° 03' 31.3" N, 088° 53' 50.5" W
Least Depth:	3.88 m (= 12.73 ft = 2.122 fm = 2 fm 0.73 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2013-096.00:00:01.000 (04/06/2013)
Dataset:	H12528_DTON_Soundings.000
FOID:	US 0000554985 00001(0226000877E90001/1)
Charts Affected:	11363_1, 11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

SOUNDG/remrks: Shoal soundings submitted by the field unit. Depths were corrected using zoning files supplied by CO-OPS and verified water levels from Pascagoula, MS (874-1533).

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_DTON_Soundings.000	US 0000554985 00001	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

12ft (11363_1, 11373_1)

2fm (1115A_1, 11360_1, 11006_1, 411_1)

2fm 0ft (11366_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20131027
	SORIND - US,US,graph,H12528
	TECSOU - 3:found by multi-beam

Office Notes

SAR Note: The sounding was submitted to MCD by AHB. The sounding is verified using set line spaced coverage MBES data.

Compilation: Concur. Submitted DTON sounding was previously charted, and retained as a chart scale sounding during the cartographic process.

Feature Images

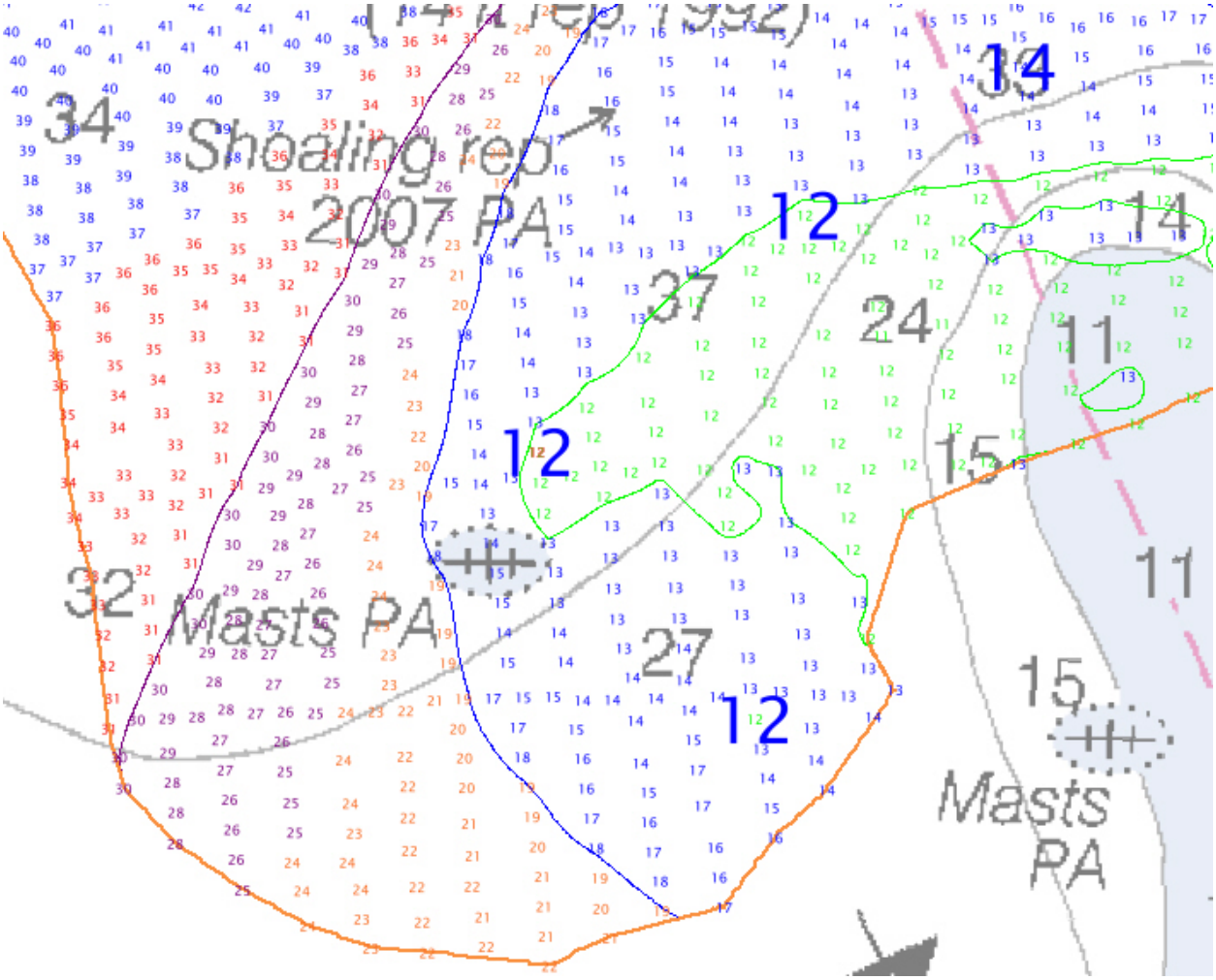


Figure 1.2.1

1.3) 12ft SOUNDING

DANGER TO NAVIGATION

Survey Summary

Survey Position:	30° 04' 15.2" N, 088° 53' 46.4" W
Least Depth:	3.80 m (= 12.47 ft = 2.078 fm = 2 fm 0.47 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2013-096.00:00:01.000 (04/06/2013)
Dataset:	H12528_DTON_Soundings.000
FOID:	US 0000554979 00001(0226000877E30001/1)
Charts Affected:	11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

SOUNDG/remrks: Shoal soundings submitted by the field unit. Depths were corrected using zoning files supplied by CO-OPS and verified water levels from Pascagoula, MS (874-1533).

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_DTON_Soundings.000	US 0000554979 00001	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

12ft (11373_1)

2fm (1115A_1, 11360_1, 11006_1, 411_1)

2fm 0ft (11366_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20131027
	SORIND - US,US,graph,H12528
	TECSOU - 3:found by multi-beam

Office Notes

SAR Note: The sounding was submitted to MCD by AHB. The sounding is verified using set line spaced coverage MBES data.

Compilation: Concur. Submitted DTON sounding was previously charted, but was not selected as a chart scale sounding during the cartographic process.

Feature Images

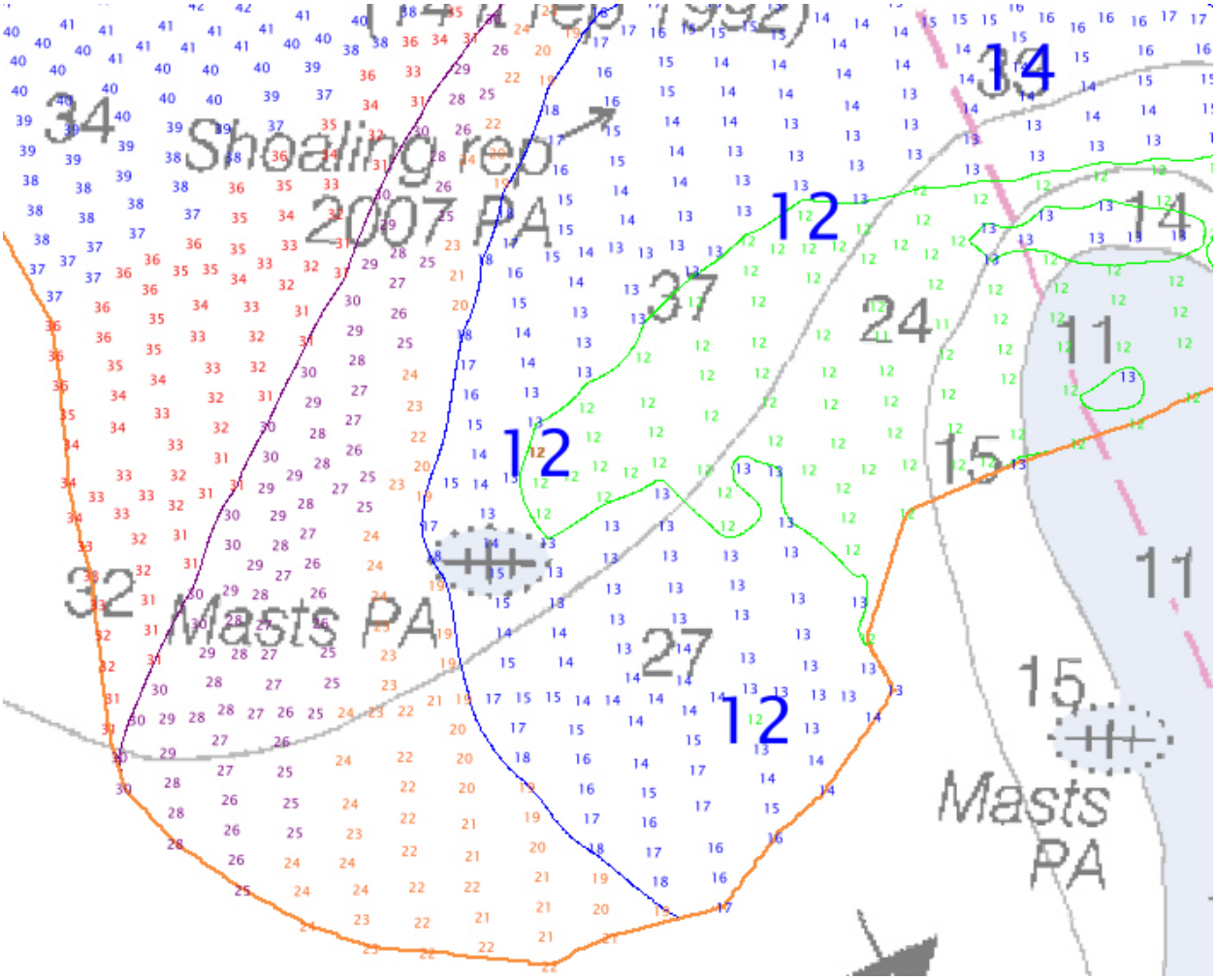


Figure 1.3.1

1.4) 29ft SOUNDING

DANGER TO NAVIGATION

Survey Summary

Survey Position:	30° 04' 53.3" N, 088° 53' 35.5" W
Least Depth:	9.01 m (= 29.55 ft = 4.925 fm = 4 fm 5.55 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2013-096.00:00:01.000 (04/06/2013)
Dataset:	H12528_DTON_Soundings.000
FOID:	US 0000554988 00001(0226000877EC0001/1)
Charts Affected:	11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

SOUNDG/remrks: Shoal soundings submitted by the field unit. Depths were corrected using zoning files supplied by CO-OPS and verified water levels from Pascagoula, MS (874-1533).

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_DTON_Soundings.000	US 0000554988 00001	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

29ft (11373_1)

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

4fm 5ft (11366_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20131027
	SORIND - US,US,graph,H12528
	TECSOU - 3:found by multi-beam

Office Notes

SAR Note: The sounding was submitted to MCD by AHB. The sounding is verified using set line spaced coverage MBES data.

Compilation: Concur. Submitted DTON sounding was previously charted, but was not selected as a chart scale sounding during the cartographic process.

Feature Images

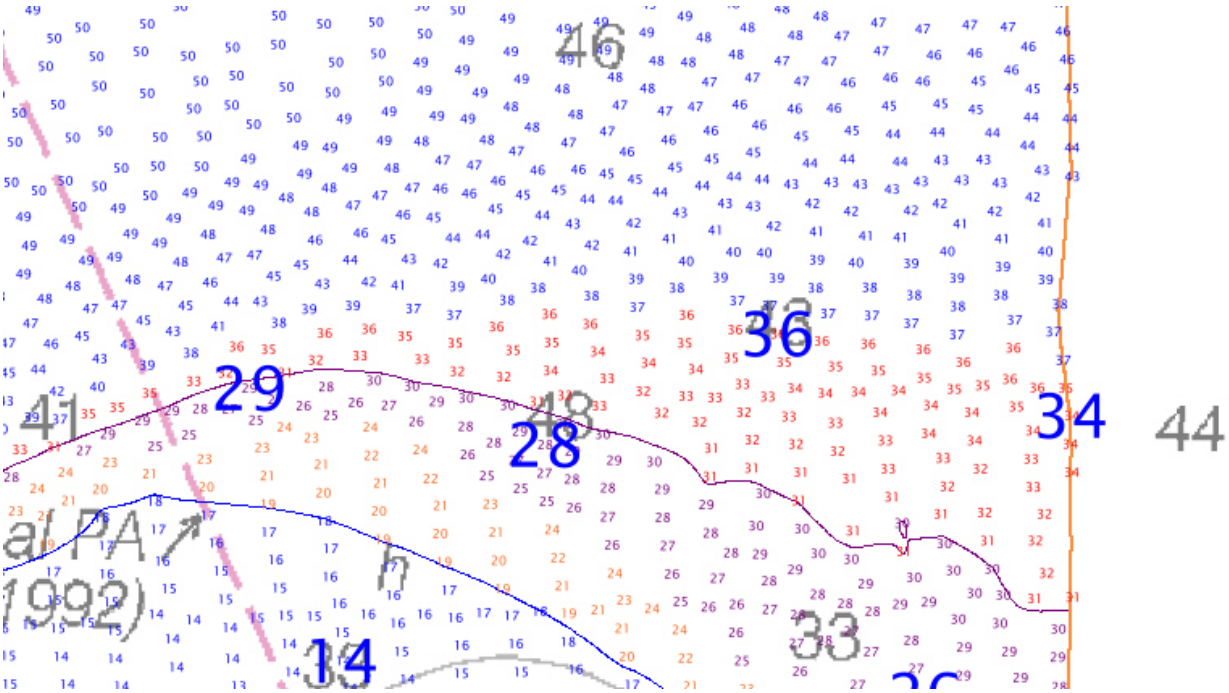


Figure 1.4.1

1.5) 14ft SOUNDING

DANGER TO NAVIGATION

Survey Summary

Survey Position:	30° 04' 28.4" N, 088° 53' 25.0" W
Least Depth:	4.46 m (= 14.65 ft = 2.441 fm = 2 fm 2.65 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2013-096.00:00:01.000 (04/06/2013)
Dataset:	H12528_DTON_Soundings.000
FOID:	US 0000554980 00001(0226000877E40001/1)
Charts Affected:	11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

SOUNDG/remrks: Shoal soundings submitted by the field unit. Depths were corrected using zoning files supplied by CO-OPS and verified water levels from Pascagoula, MS (874-1533).

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_DTON_Soundings.000	US 0000554980 00001	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

14ft (11373_1)

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

2fm 2ft (11366_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20131027
	SORIND - US,US,graph,H12528
	TECSOU - 3:found by multi-beam

Office Notes

SAR Note: The sounding was submitted to MCD by AHB. The sounding is verified using set line spaced coverage MBES data.

Compilation: Concur. Submitted DTON sounding was previously charted, but was not selected as a chart scale sounding during the cartographic process.

Feature Images

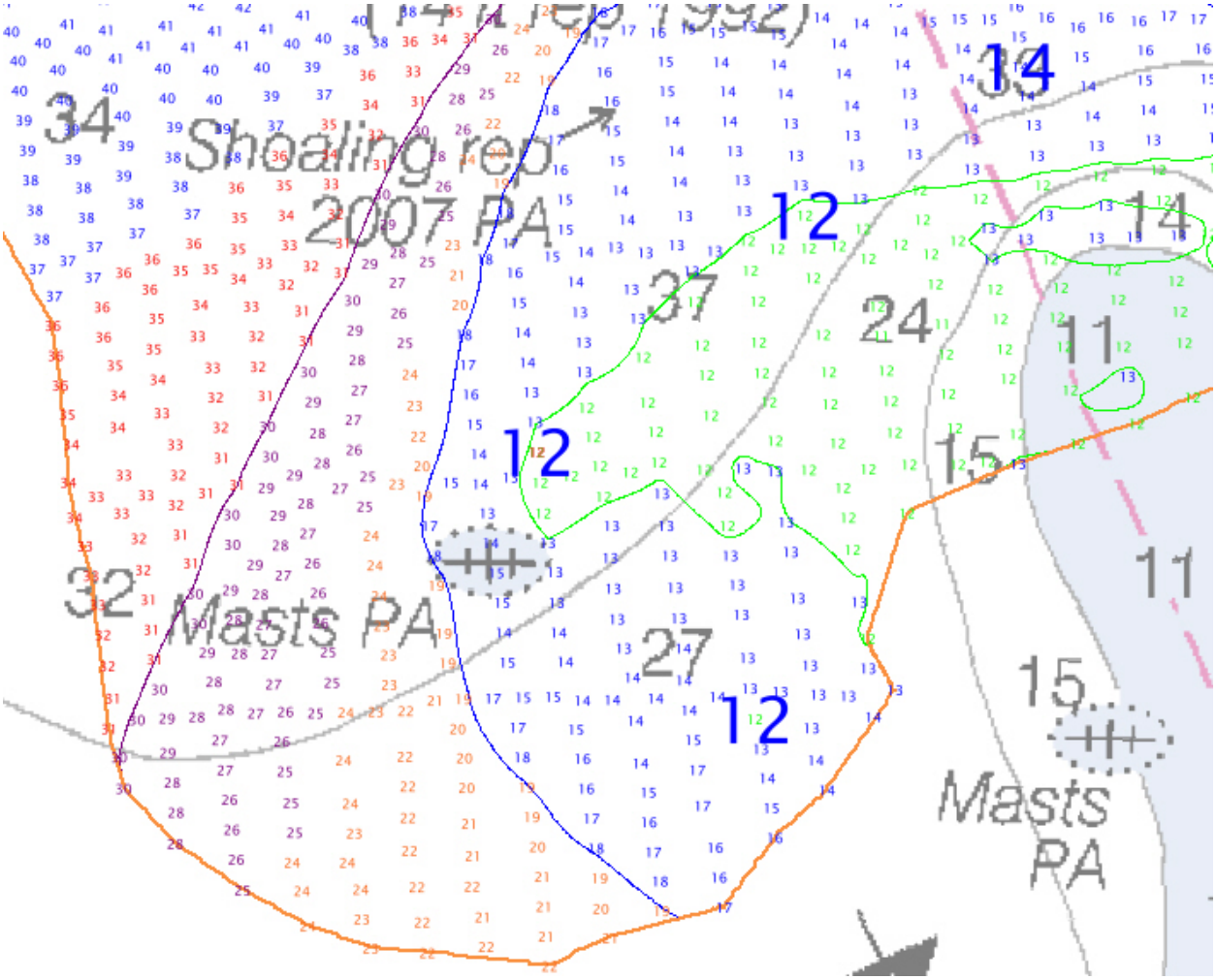


Figure 1.5.1

1.6) 28ft SOUNDING

DANGER TO NAVIGATION

Survey Summary

Survey Position:	30° 04' 48.6" N, 088° 53' 04.1" W
Least Depth:	8.75 m (= 28.72 ft = 4.787 fm = 4 fm 4.72 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2013-096.00:00:01.000 (04/06/2013)
Dataset:	H12528_DTON_Soundings.000
FOID:	US 0000554989 00001(0226000877ED0001/1)
Charts Affected:	11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

SOUNDG/remrks: Shoal soundings submitted by the field unit. Depths were corrected using zoning files supplied by CO-OPS and verified water levels from Pascagoula, MS (874-1533).

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_DTON_Soundings.000	US 0000554989 00001	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

28ft (11373_1)

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

4fm 4ft (11366_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20131027
	SORIND - US,US,graph,H12528
	TECSOU - 3:found by multi-beam

Office Notes

SAR Note: The sounding was submitted to MCD by AHB. The sounding is verified using set line spaced coverage MBES data.

Compilation: Concur. Submitted DTON sounding was previously charted, but was not selected as a chart scale sounding during the cartographic process.

Feature Images

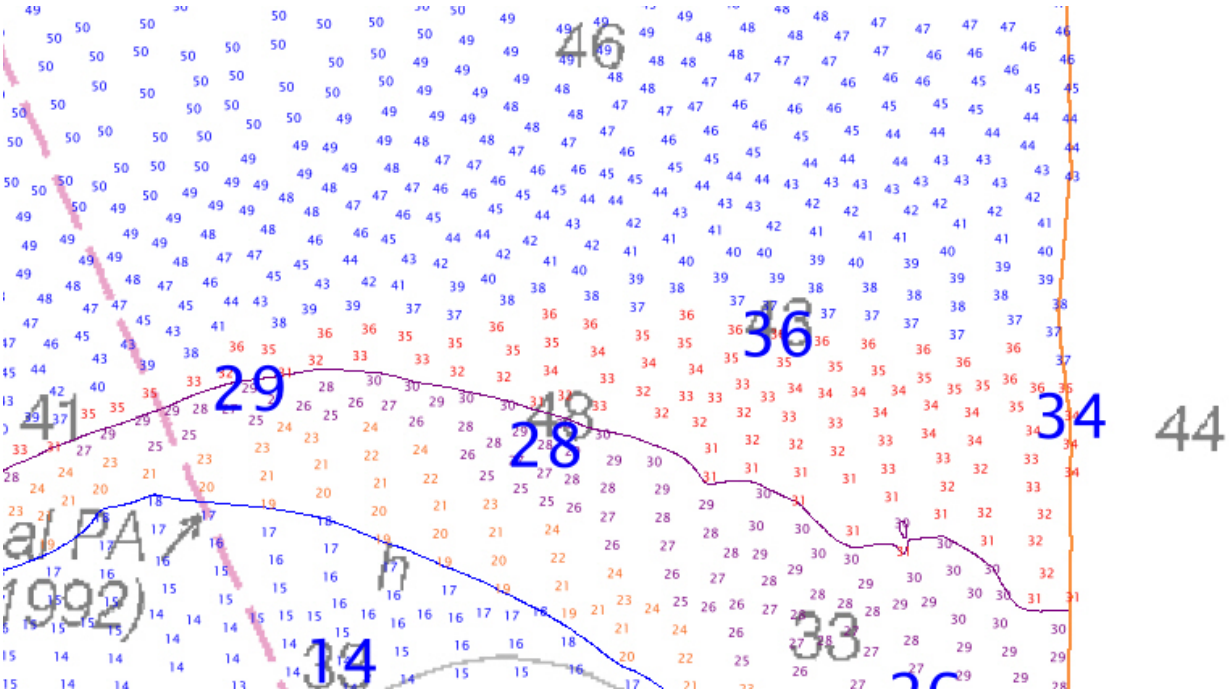


Figure 1.6.1

1.7) 12ft SOUNDING

DANGER TO NAVIGATION

Survey Summary

Survey Position: 30° 04' 20.2" N, 088° 52' 59.0" W

Least Depth: 3.83 m (= 12.56 ft = 2.094 fm = 2 fm 0.56 ft)

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2013-096.00:00:01.000 (04/06/2013)

Dataset: H12528_DTON_Soundings.000

FOID: US 0000554990 00001(0226000877EE0001/1)

Charts Affected: 11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

SOUNDG/remrks: Shoal soundings submitted by the field unit. Depths were corrected using zoning files supplied by CO-OPS and verified water levels from Pascagoula, MS (874-1533).

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_DTON_Soundings.000	US 0000554990 00001	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

12ft (11373_1)

2fm (1115A_1, 11360_1, 11006_1, 411_1)

2fm 0ft (11366_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: QUASOU - 6:least depth known

SORDAT - 20131027

SORIND - US,US,graph,H12528

TECSOU - 3:found by multi-beam

Office Notes

SAR Note: The sounding was submitted to MCD by AHB. The sounding is verified using set line spaced coverage MBES data.

Compilation: Concur. Submitted DTON sounding was previously charted, but was not selected as a chart scale sounding during the cartographic process.

Feature Images

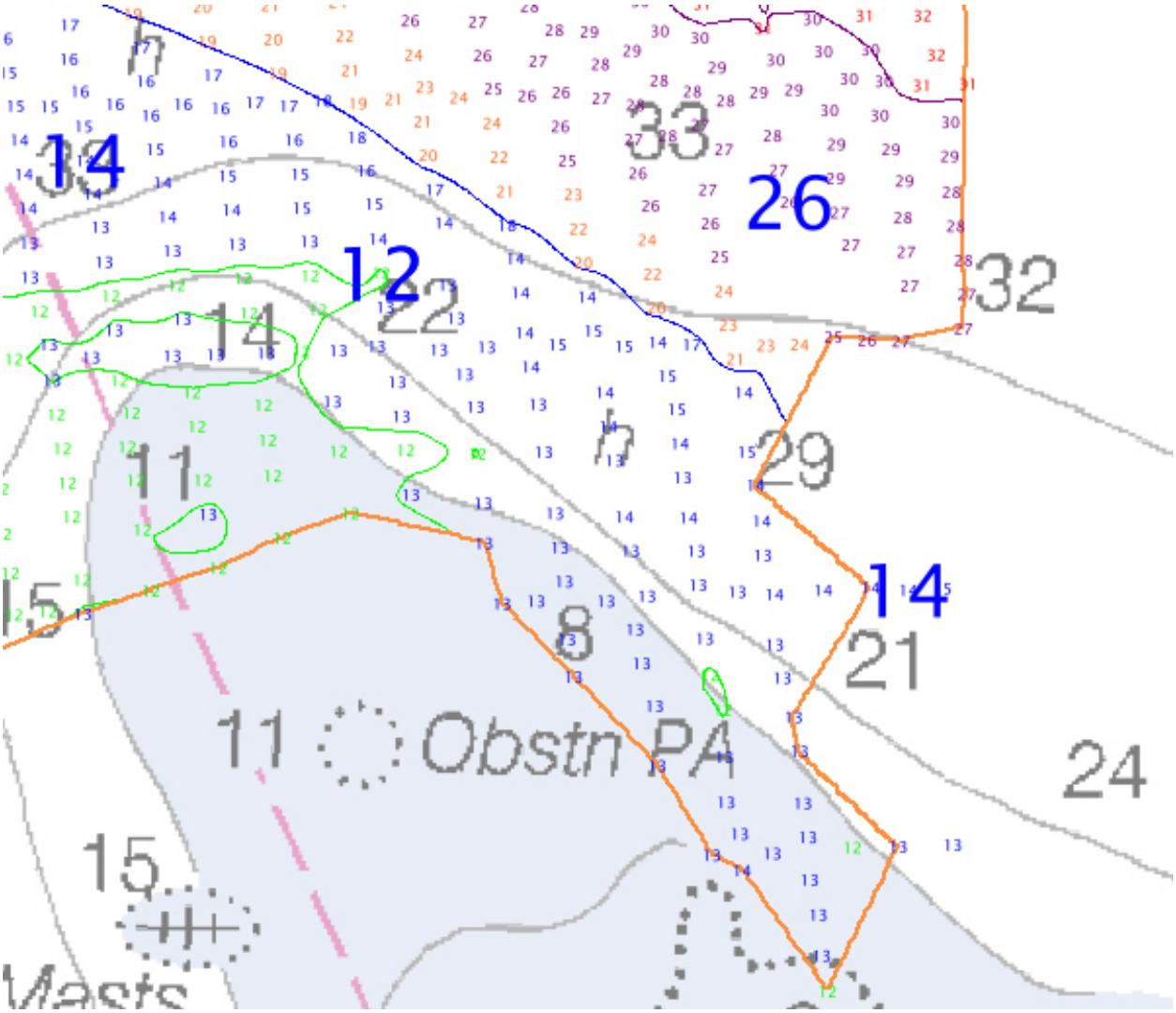


Figure 1.7.1

1.8) 36ft SOUNDING

DANGER TO NAVIGATION

Survey Summary

Survey Position:	30° 04' 59.2" N, 088° 52' 39.5" W
Least Depth:	11.07 m (= 36.32 ft = 6.054 fm = 6 fm 0.32 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2013-096.00:00:01.000 (04/06/2013)
Dataset:	H12528_DTON_Soundings.000
FOID:	US 0000554987 00001(0226000877EB0001/1)
Charts Affected:	11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

SOUNDG/remrks: Shoal soundings submitted by the field unit. Depths were corrected using zoning files supplied by CO-OPS and verified water levels from Pascagoula, MS (874-1533).

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_DTON_Soundings.000	US 0000554987 00001	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

36ft (11373_1)

6fm (1115A_1, 11360_1, 11006_1, 411_1)

6fm 0ft (11366_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20131027
	SORIND - US,US,graph,H12528
	TECSOU - 3:found by multi-beam

Office Notes

SAR Note: The sounding was submitted to MCD by AHB. The sounding is verified using set line spaced coverage MBES data.

Compilation: Concur. Submitted DTON sounding was previously charted, but was not selected as a chart scale sounding during the cartographic process.

Feature Images

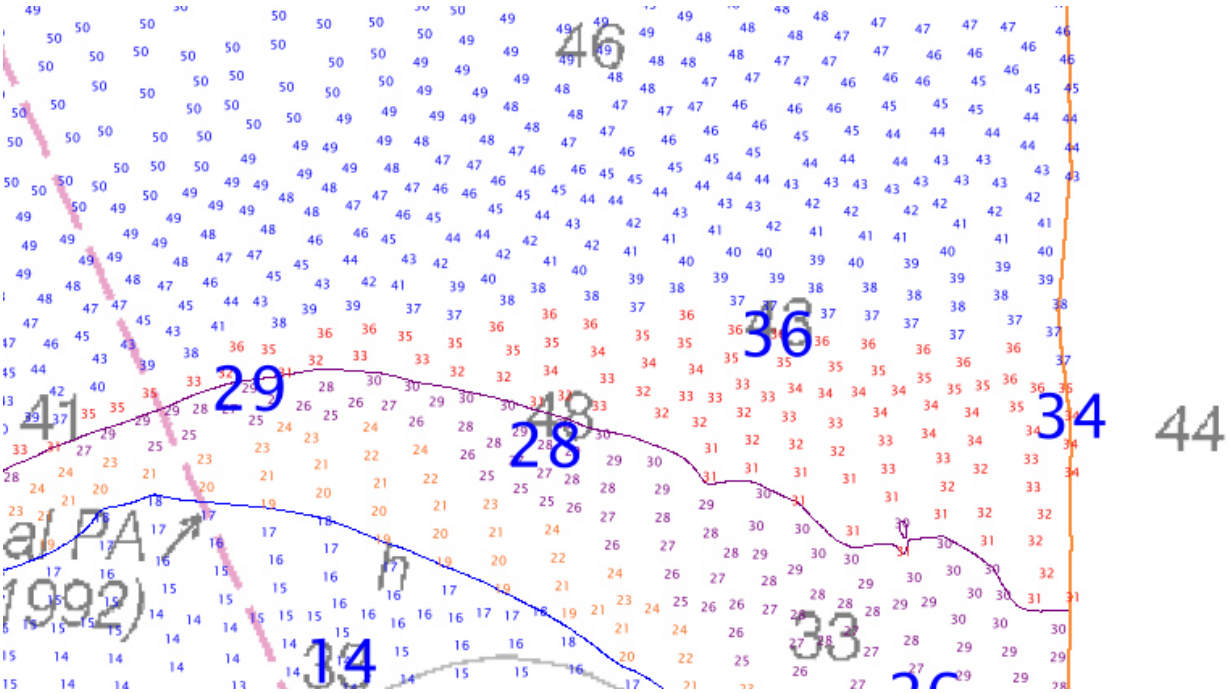


Figure 1.8.1

1.9) 26ft SOUNDING

DANGER TO NAVIGATION

Survey Summary

Survey Position:	30° 04' 26.1" N, 088° 52' 23.3" W
Least Depth:	8.12 m (= 26.65 ft = 4.442 fm = 4 fm 2.65 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2013-096.00:00:01.000 (04/06/2013)
Dataset:	H12528_DTON_Soundings.000
FOID:	US 0000554982 00001(0226000877E60001/1)
Charts Affected:	11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

SOUNDG/remrks: Shoal soundings submitted by the field unit. Depths were corrected using zoning files supplied by CO-OPS and verified water levels from Pascagoula, MS (874-1533).

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_DTON_Soundings.000	US 0000554982 00001	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

26ft (11373_1)

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

4fm 2ft (11366_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20131027
	SORIND - US,US,graph,H12528
	TECSOU - 3:found by multi-beam

Office Notes

SAR Note: The sounding was submitted to MCD by AHB. The sounding is verified using set line spaced coverage MBES data.

Compilation: Concur. Submitted DTON sounding was previously charted, but was not selected as a chart scale sounding during the cartographic process.

Feature Images

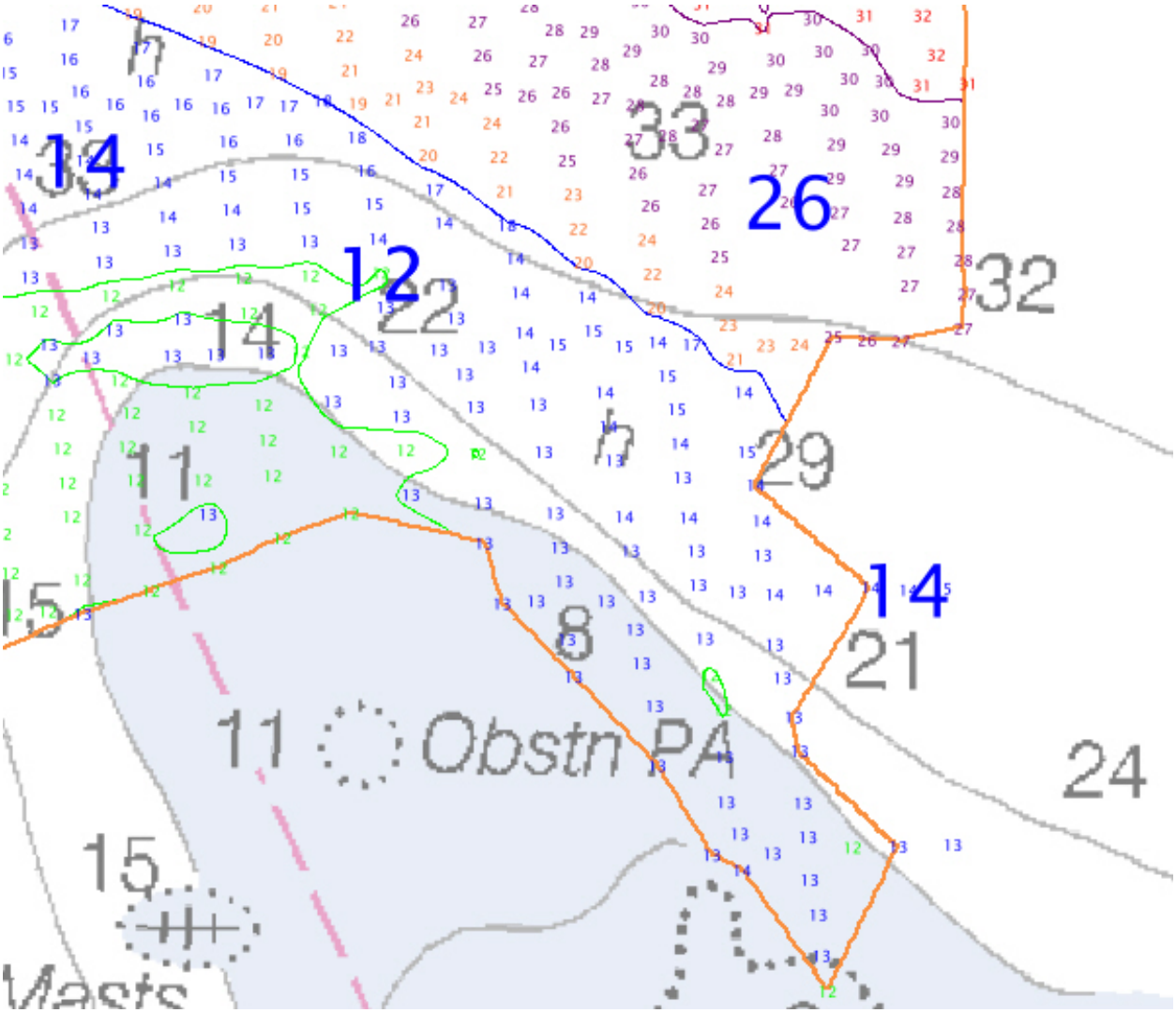


Figure 1.9.1

1.10) 14ft SOUNDING

DANGER TO NAVIGATION

Survey Summary

Survey Position:	30° 03' 56.7" N, 088° 52' 12.3" W
Least Depth:	4.38 m (= 14.38 ft = 2.397 fm = 2 fm 2.38 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2013-096.00:00:01.000 (04/06/2013)
Dataset:	H12528_DTON_Soundings.000
FOID:	US 0000554983 00001(0226000877E70001/1)
Charts Affected:	11363_1, 11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

SOUNDG/remrks: Shoal soundings submitted by the field unit. Depths were corrected using zoning files supplied by CO-OPS and verified water levels from Pascagoula, MS (874-1533).

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_DTON_Soundings.000	US 0000554983 00001	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

14ft (11363_1, 11373_1)

2 ¼fm (1115A_1, 11360_1, 11006_1, 411_1)

2fm 2ft (11366_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20131027
	SORIND - US,US,graph,H12528
	TECSOU - 3:found by multi-beam

Office Notes

SAR Note: The sounding was submitted to MCD by AHB. The sounding is verified using set line spaced coverage MBES data.

Compilation: Concur. Submitted DTON sounding was previously charted, but was not selected as a chart scale sounding during the cartographic process.

Feature Images

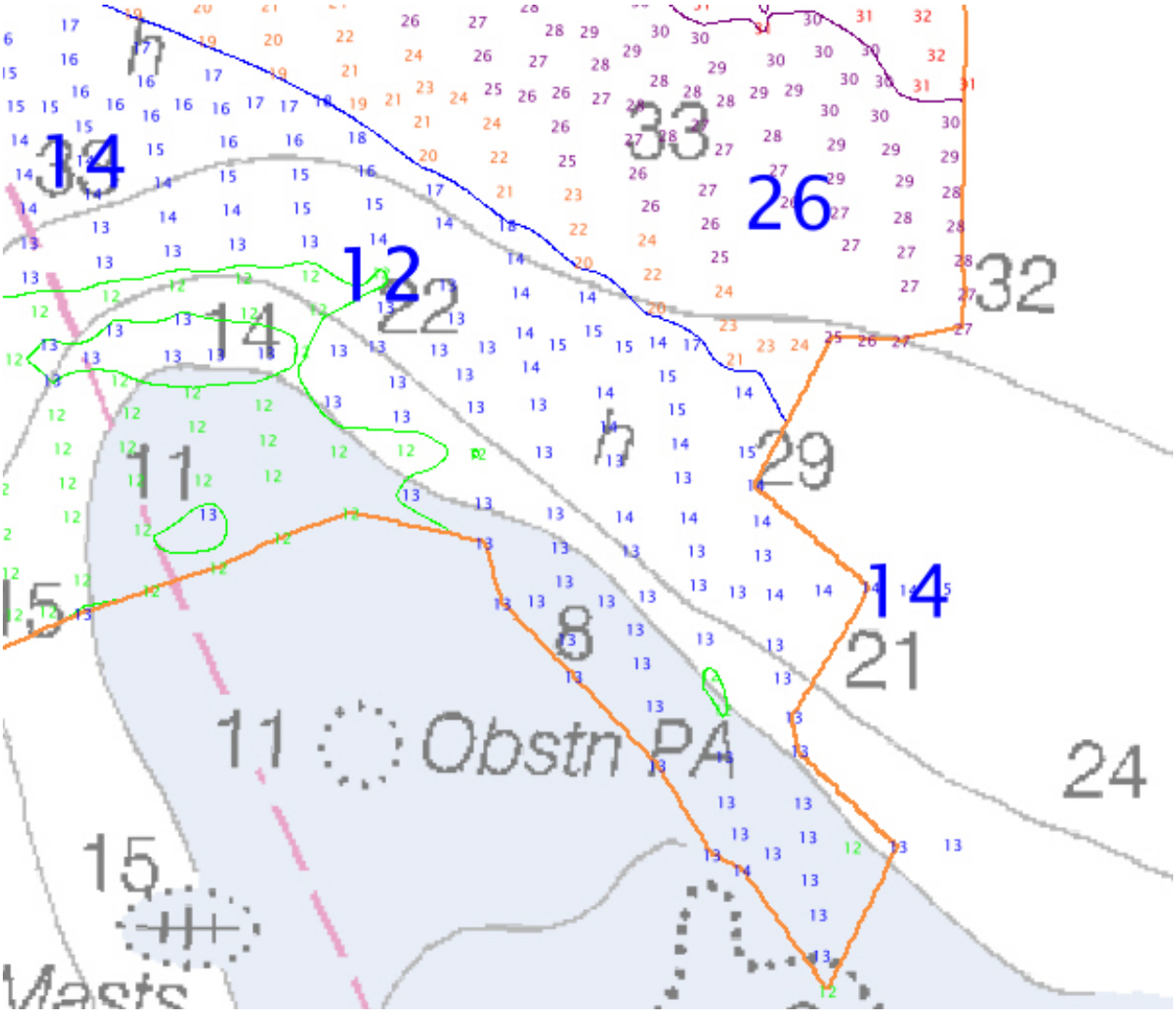


Figure 1.10.1

1.11) 34ft SOUNDING

DANGER TO NAVIGATION

Survey Summary

Survey Position:	30° 04' 52.1" N, 088° 52' 08.3" W
Least Depth:	10.57 m (= 34.68 ft = 5.780 fm = 5 fm 4.68 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2013-096.00:00:01.000 (04/06/2013)
Dataset:	H12528_DTON_Soundings.000
FOID:	US 0000554986 00001(0226000877EA0001/1)
Charts Affected:	11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

SOUNDG/remrks: Shoal soundings submitted by the field unit. Depths were corrected using zoning files supplied by CO-OPS and verified water levels from Pascagoula, MS (874-1533).

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_DTON_Soundings.000	US 0000554986 00001	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

34ft (11373_1)

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

5fm 4ft (11366_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20131027
	SORIND - US,US,graph,H12528
	TECSOU - 3:found by multi-beam

Office Notes

SAR Note: The sounding was submitted to MCD by AHB. The sounding is verified using set line spaced coverage MBES data. Compilation: Concur. Submitted DTON sounding was previously charted, but was not selected as a chart scale sounding during the cartographic process.

Feature Images

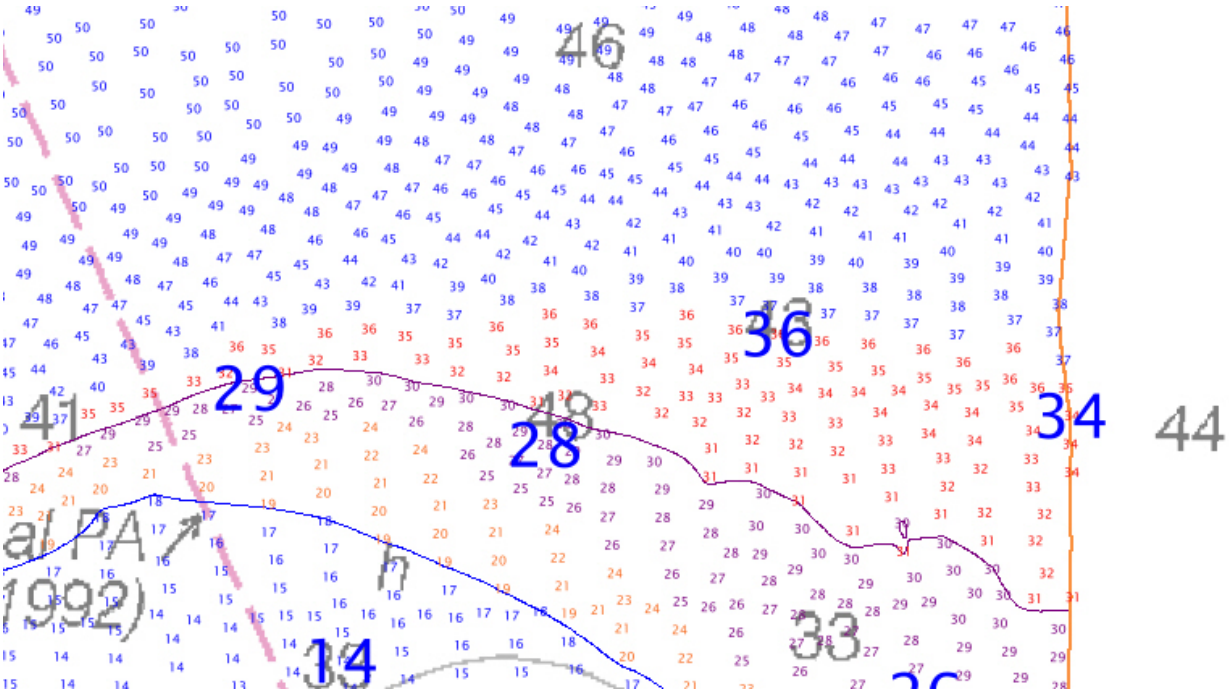


Figure 1.11.1

H12528 AWOIS Feature Report

Registry Number: H12528
State: Mississippi
Locality: Approaches to Mississipi Sound
Sub-locality: Vicinity of North Chandeleur Islands
Project Number: OPR-J348-KR-13
Survey Dates: 03/15/2013 - 10/27/2013

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11363	41st	06/01/2007	1:80,000 (11363_1)	[L]NTM: ?
11373	47th	10/01/2008	1:80,000 (11373_1)	[L]NTM: ?
11366	11th	01/01/2008	1:250,000 (11366_1)	[L]NTM: ?
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	AWOIS #14960	Wreck	[None]	30° 03' 44.9" N	088° 54' 17.6" W	---
1.2	AWOIS #7311	GP	[None]	30° 05' 01.3" N	088° 52' 38.4" W	---
1.3	AWOIS #15030	Wreck	[None]	30° 03' 06.5" N	088° 49' 35.9" W	---

1.1) AWOIS #14960

Survey Summary

Survey Position: 30° 03' 44.9" N, 088° 54' 17.6" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2003-244.00:00:00.000 (09/01/2003)

Dataset: H12528_AWOIS.000

FOID: US 0000499586 00001(022600079F820001)

Charts Affected: 11363_1, 11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

WRECKS/remrks: DEA CF #72. AWOIS #14960. Disproved by 200% side scan coverage and visually.

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_AWOIS.000	US 0000499586 00001	0.00	000.0	Primary

Hydrographer Recommendations

History: Masts PA

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 4:wreck showing mast/masts

SORDAT - 20030900

SORIND - US,US,graph,chart 11363

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

WATLEV - 4:covers and uncovers

Office Notes

SAR Note: The wreck is disproved using set line spaced MBES and 200% side scan sonar coverage.

COMPILATION: Concur. AWOIS item 14960 disprovided with set line spaced MBES and 200% side scan. Recommend delete Wreck with Mast/Masts Position Approximate from chart and update AWOIS database with survey findings.

1.2) AWOIS #7311

Survey Summary

Survey Position: 30° 05' 01.3" N, 088° 52' 38.4" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 1981-001.01:01:01.001 (01/01/1981)

Dataset: H12528_AWOIS.000

FOID: US 0000499584 00001(022600079F800001)

Charts Affected: 11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

$CSYMB/remrks: Uncharted AWOIS #7311 disproved by 200% side scan coverage.

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_AWOIS.000	US 0000499584 00001	0.00	000.0	Primary

Hydrographer Recommendations

History: FE309WD/74--OPR-479-RU/HE-74; FORMERLY H-9420WD; MODIFIED EVALUATION REPORT 43 FOOT GROUNDING IN LAT 30-05-00.6N LONG 88-52-38.3W. NOT CLEARED IN PRIOR DEPTHS OF 47 FEET. EVALUATOR RECOMMENDS CHARTING A 43-FOOT DEPTH AS SURVEYED AND VERIFYING OR DISPROVING SHOAL WITH ADDITIONAL FIELD WORK. (ENTERED 4/18/89 SJV)

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: SORDAT - FE09WD/74 OPR-479-RU/HE

SORIND - US,US,PRF,OPR-J348-KR-13

Office Notes

SAR Note: Uncharted feature; AWOIS item 7311 is disproven using set line spaced multibeam and 200% side scan sonar coverage. The SORIND could not be obtained from the assigned feature file.

COMPILATION: Concur. AWOIS item 7311 disproved using 200% side scan sonar. Recommend do not chart and update AWOIS database with survey findings.

1.3) AWOIS #15030

Survey Summary

Survey Position: 30° 03' 06.5" N, 088° 49' 35.9" W

Least Depth: [None]

TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]

Timestamp: 2003-244.00:00:00.000 (09/01/2003)

Dataset: H12528_AWOIS.000

FOID: US 0000499585 00001(022600079F810001)

Charts Affected: 11363_1, 11373_1, 11366_1, 1115A_1, 11360_1, 11006_1, 411_1

Remarks:

WRECKS/remrks: DEA CF #73. AWOIS #15030. Disproved by 200% side scan coverage and visually.

Feature Correlation

Source	Feature	Range	Azimuth	Status
H12528_AWOIS.000	US 0000499585 00001	0.00	000.0	Primary

Hydrographer Recommendations

History: LNM 38/87 Visible Wreck was added to chart.

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:

CATWRK - 5:wreck showing any portion of hull or superstructure

SORDAT - 20030900

SORIND - US,US,graph,chart 11363

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

WATLEV - 2:always dry

Office Notes

SAR Note: The wreck is disproven using set line spaced MBES and 200% side scan sonar coverage.

COMPILATION: Concur. AWOIS item 15030 disproved with set line spaced MBES and 200% side scan. Recommend delete Wreck Showing Portion of Hull/Superstructure Position Approximate from chart and update AWOIS database with survey findings.

APPROVAL PAGE

H12528

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

- H12528_DR.pdf
- Collection of depth varied resolution BAGS
- Processed survey data and records
- H12528_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 Matthew Jaskoski, NOAA
Chief, Atlantic Hydrographic Branch