H11806

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey **Hydrographic Survey**
Field No. **H11806**
Registry No. **OPR-J977-FU-08**

LOCALITY

State **Louisiana**

General Locality **Gulf of Mexico**

Sub-locality **Vicinity of Quatre Bayou Pass**

2008 - 2009

CHIEF OF PARTY

David Briggs

LIBRARY & ARCHIVES

DATE

Title Sheet (NOAA Form 77-28)

NOAA FORM 77-28 (11-72) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION **HYDROGRAPHIC TITLE SHEET**	REGISTER NO. H11806
INSTRUCTIONS – The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office	FIELD NO.

State Louisiana

General Locality Gulf of Mexico

Locality Vicinity of Quatre Bayou Pass

Scale n/a Date of Survey 08/16/08 – 04/03/09

Instructions dated May 28, 2008 Project No. OPR-K977-FU-08

Vessel R/V LOCATOR (CF-4540-NB) and R/V CHINOOK (AK-1437-K)

Chief of party David D. Briggs

Surveyed by BRIGGS, POECKERT, ORTHMANN, GILL, FARLEY, MOUNT, ROYKTA, GOSS, HOLLY, ET AL

Soundings taken by echo sounder, hand lead, pole ODOM DF3200 SBES (HULL MOUNTED BOTH VESSELS), RESON SEABAT 8101 MBES (LOCATOR - POLE MOUNT)

Graphic record scaled by FUGRO PELAGOS, INC. PERSONNEL

Graphic record checked by FUGRO PELAGOS, INC. PERSONNEL

Protracted by N/A Automated plot by N/A

Verification by ***Atlantic Hydrographic Branch***

Soundings in ~~METERS~~ ***Feet*** at MLLW

REMARKS: The purpose of this work is to provide NOAA with a modern hydrographic and debris mapping survey in the Gulf of Mexico in the vicinity of Quatre Bayou Pass.

ALL TIMES ARE RECORDED IN UTC. ***UTM Zone 16***

Notes in red, bold, italic were made during office processing.

FUGRO PELAGOS INC
3738 RUFFIN ROAD
SAN DIEGO, CA 92123

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A - Area Surveyed

H11806 (Sheet C) is located in the Gulf of Mexico in the vicinity of Quatre Bayou Pass. It is bound by the coordinates listed below.

Hydrographic data collection began on August 16, 2008 and ended on April 3, 2009. ***Concur***

Table 1 – H11806 Sheet Limits

Sheet Limits H11806 Sheet C		
Point #	Positions on NAD83	
	Degrees Latitude (N)	Degrees Longitude (W)
1	29-18-46.480	89-56-57.242
2	29-18-46.480	89-47-39.948
3	29-08-35.581	89-47-39.948
4	29-08-35.581	89-56-57.242

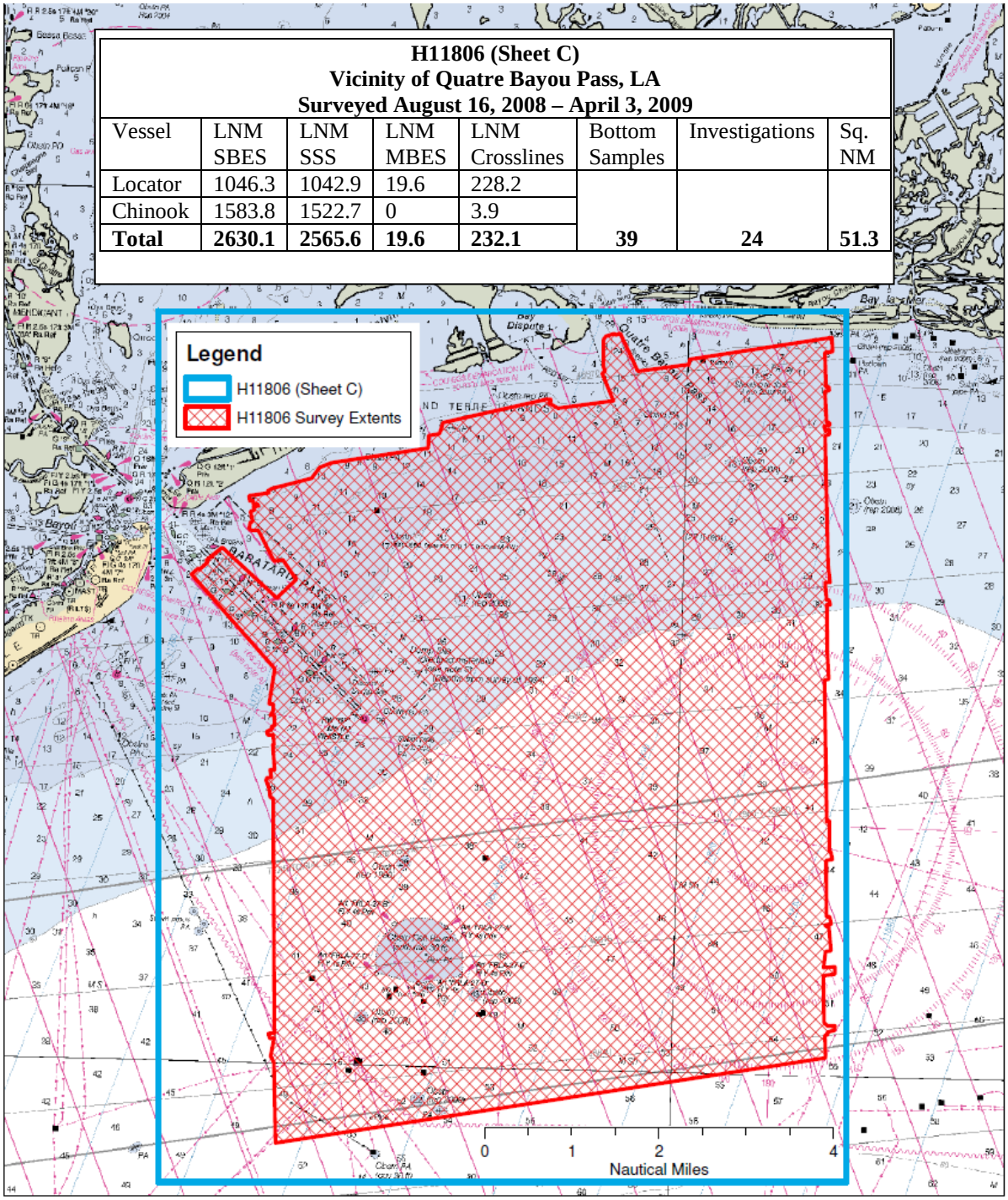


Figure 1 H11806 Area Surveyed

B – Data Acquisition & Processing *See also the H-Cell Report.*

Refer to the OPR-K977-FU-08 Data Acquisition and Processing Report* for a detailed description of all equipment, survey vessels, processing procedures and quality control features. Items specific to this survey and any deviations from the Data Acquisition and Processing Report* are discussed in the following sections.

Equipment & Vessels

The R/V Chinook and the R/V Locator acquired all sounding and sidescan data for H11806. The Chinook (28' in length with a draft of 18"), and the Locator (25' in length with a draft of 18") were equipped with ODOM DF3200 singlebeam echosounders and Klein model 3000 sidescan sonars. The vessels were also equipped with two AML sound velocity and pressure sensors (SV&P) for sound velocity profiles. Vessel attitude and position were measured using an Applanix Position and Orientation System for Marine Vessel (POS MV 320 V4) with singlebeam RAW files logged by WinFrog v3.08.23 and sidescan XTF files logged by Triton ISIS 7.1.500.111.

The R/V Locator was also equipped with a Reson Seabat 8101 multibeam echosounder for target verification. Multibeam data was logged in XTF format in WinFrog v3.08.23.

Refer to OPR-K977-FU-08 Data Acquisition & Processing Report* for a complete listing of equipment and vessel descriptions.

Quality Control

Crosslines

Quality control crosslines were planned so that most main scheme lines would intersect at least one crossline, were well-distributed geographically, and that total crossline nautical miles ran would total at least 8% of the main scheme nautical miles.

Total singlebeam crossline length surveyed was 232.1 nautical miles or 8.8 percent of the total main scheme line length. Each crossline was compared to a 5m BASE surface created from all main scheme lines, using the CARIS HIPS QC report routine. All singlebeam soundings passed at 95% or better. ***Concur.***

Formal multibeam crosslines were not logged separately because most multibeam lines were acquired over individual targets in a hatch-like pattern (perpendicular and intersecting with each other). Therefore, for the purpose of QC report generation, a random sampling of east-west oriented multibeam lines were used as crosslines and compared to a 0.15m BASE surface generated from north-south oriented multibeam lines. All multibeam soundings passed at 95% or better. ***Concur.***
Included with survey deliverables.

QC reports are located in Separate IV* (Crossline Comparisons).

Note: The QC reports were generated based on the given accuracy specification of:

$$\pm\sqrt{[a^2 + (b*d)^2}$$

where, a = 0.5, b = 0.013 and d = depth.

However, since a variance of a difference, rather than a variance from a mean is being used, the a and b values were defined in the user defined option within the CARIS HIPS QC Report routine as:

$$a = 0.5*\sqrt{2} = 0.707$$
$$b = 0.013*\sqrt{2} = 0.018$$

It should be noted that most crosslines for this project were run inshore past the edge of the main scheme survey area, terminating in around eight feet of water. This was done to provide the approximate position of the depth contours inshore of the survey limit. As this data was not main scheme it is not included in the accompanying fieldsheet or XYZ file; however, it is available within the CARIS project if required.

Included with original field unit submission.

Survey Junctions ***See also the H-Cell Report.***

H11806 (Sheet C) junctions with:

Registry #	Date	Junction Side
H11805	2009	West
H11807	2009	East

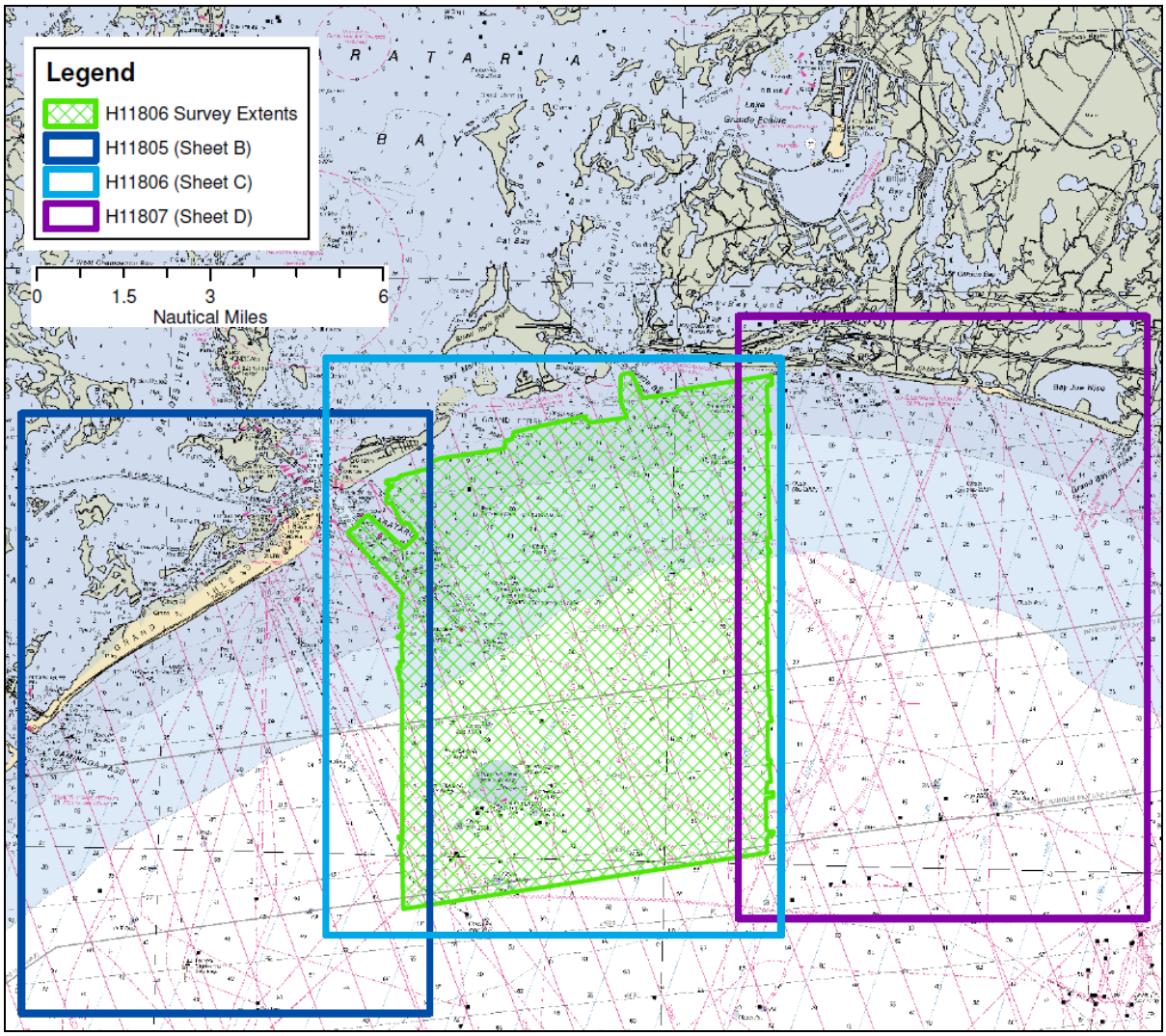


Figure 2 H11806 Survey Junctions

The surveys are in agreement along their common borders. The agreement was noted in the field using the mosaics created during sidescan processing. The conformity is also apparent in the final Shoal Biased Surfaces.

Quality Control Checks

During the hydrographic project OPR-K977-FU-08, the R/Vs Locator and Chinook conducted a number of confidence checks. Confidence checks for the singlebeam consisted of weekly lead line checks. Multibeam data collected with the Reson 8101 on the Locator, and data sets collected with the ODOM DF3200 systems that were installed on the Locator and Chinook respectively, compared within 5 to 10 centimeters. Sidescan sonar confidence checks were performed daily by visual confirmation that a distinct change in bottom return could be seen passing in a cross track fashion through nadir. Refer to the Data and Acquisition Processing Report Appendix IV* for the Sidescan Sonar Daily Confidence Checks.

Positioning system confidence checks were conducted on a daily basis using the POS MV controller software. The controller software had numerous real time displays that were monitored throughout the survey to ensure the positional accuracies specified in the NOS Hydrographic Surveys Specifications and Deliverables (version May 2008) were achieved. These include, but are not limited to the following: GPS Status, Position Accuracy, Receiver Status (which included HDOP) and Satellite Status. During periods of high HDOP and/or low number of available satellites, survey operations were stopped.

Since final positions were derived using a post-processed kinematic GPS (PPK) process, as an independent check these positions were compared to positions determined in real time using DGPS (USCG). Agreement was well within specifications.

Data Quality

In general, the singlebeam, sidescan sonar, and multibeam data quality for H11806 were good. Any deviations are noted below. Refer to the OPR-K977-FU-08 Data Acquisition and Processing Report* for a detailed description of the survey equipment and methodology used over the course of this survey.

1. The 100% sidescan sonar coverages show some holidays when viewed separately. This was usually due to missed (unlogged) pings when oriented across track.

   However when both 100% coverages are merged there are no holidays, demonstrating that the areas in the holidays were ensonified at least once. If the second 100% coverage indicated a feature then the feature was investigated with multibeam.

   The issue was discussed with the NOAA COTR prior to leaving the field; see Appendix V* (Supplemental Survey Records) for a record. An example is illustrated below.

Included with survey deliverables.

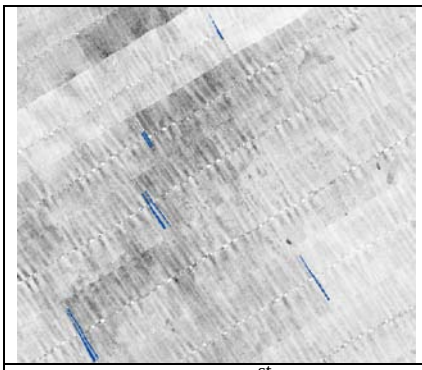
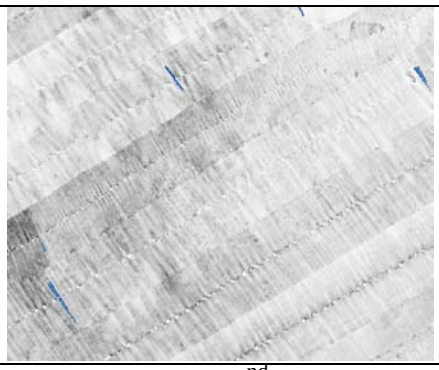
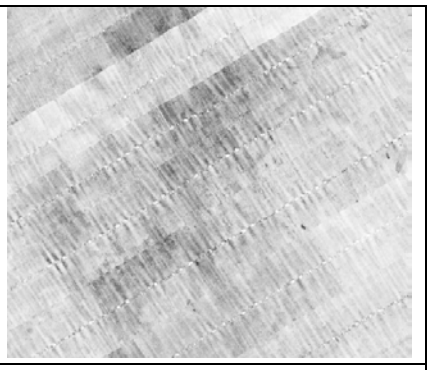
		
100% Coverage (1st pass)	100% Coverage (2nd pass)	200% Coverage (combined)

Figure 3 Holidays in 100% coverages

2. A positioning bust or mismatch is apparent in the sidescan data when features captured on adjacent lines are plotted together. The error was on the order of one to four meters depending on feature distance from nadir, being worse on the outside edge of the swath. The cause was identified as a latency issue whereby pings output by the Klein sidescan system were time tagged in the ISIS Sonar logging software five to eight pings late and therefore paired with slightly out of sync navigation and yaw records. The issue was addressed in the feature processing software (Target Analyst) by placing the final position of features midway between two offset features, which correlated well with the multibeam positions. All final feature positions are within specifications.

3. A vertical oscillation that correlates to weather conditions is evident in the singlebeam data. Despite an apparent error of 0.10 to 0.20 m, the data is within specifications and passes QC in the crossline comparisons.

4. An apparent dredge pipeline was found in the survey area and is indicated on the excerpt from Chart 11358 shown below. It appears this pipeline may have been damaged or broken during one of the recent hurricanes (Gustav or Ike) and is now in two parts (red arrows). Portions of the pipeline were found in the adjacent sheet (green arrow). Various buoys consisting of 55 gallon steel drums were found along the pipeline route. This pipeline is part of a dredge operation by Great Lakes Dredge & Dock Co. This company was in the process of laying pipe at the time of this survey to the east of the two broken pipes (green arrow, outside of this survey but within H11807). The pipeline sections are visible in the dataset but are all temporary features that are subject to removal by the dredge company. ***Concur - See Appendix V for communications with Great Lakes Dredge & Dock which documents the removal of the dredge pipes. Do not chart. Chart present survey depths.***

   The coordinates for the ends of the pipelines are:

   West section: 29-17-10N 089-49-40W to 29-16-18N 089-50-06W

   East section: 29-16-56N 089-48-07W to 29-17-39N 089-49-16W

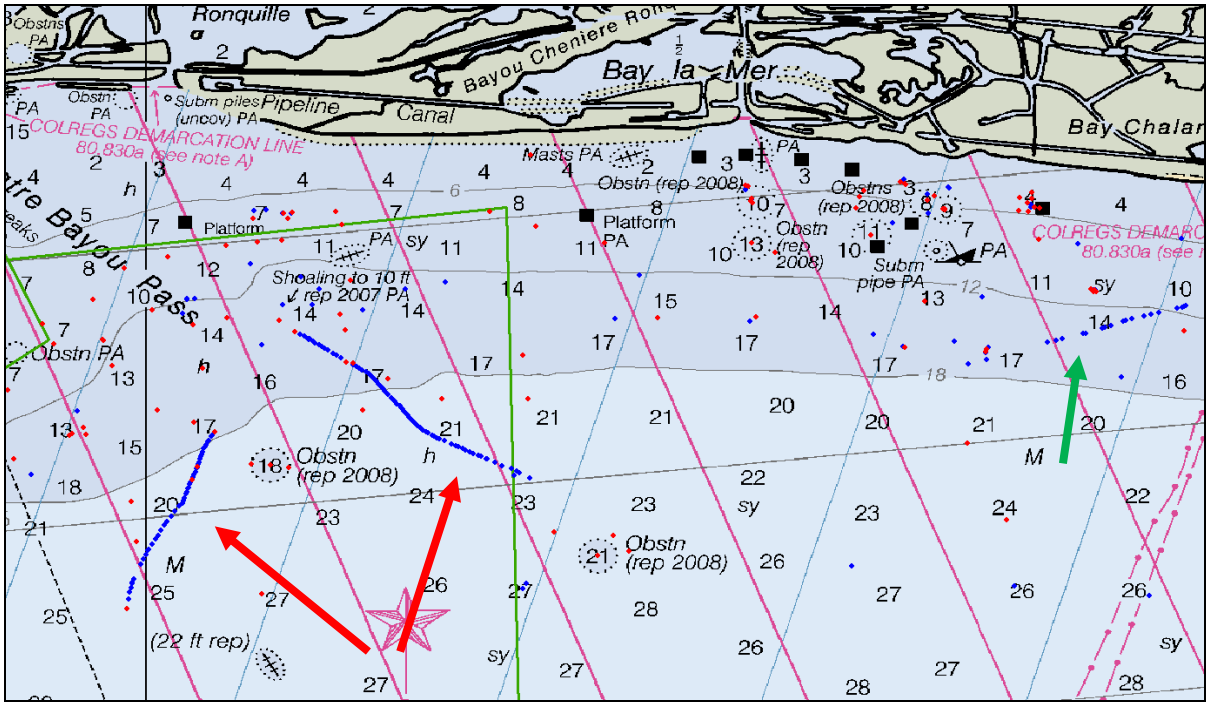


Figure 4 Contacts acquired on dredge pipes

5. Also evident in the data is a dredge borrow pit, centered at 29-16-05.59 N, 89-50-21.91 W, associated with the above dredge pipelines. At time of survey the pit was actively being dredged with a maximum depth of 10.1 meters (33 feet). The feature is portrayed as a DRGARE object in the accompanying S-57 feature file. ***Do not chart borrow pit. Chart survey depths within the common area.***

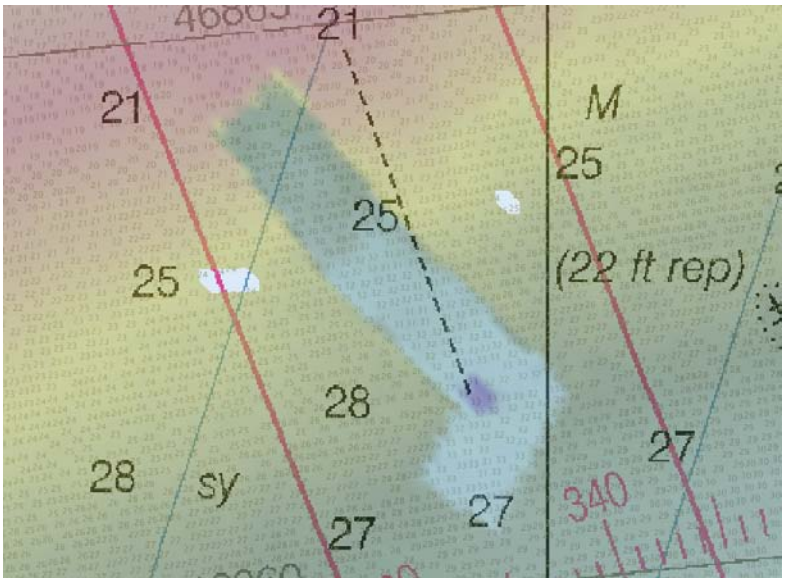


Figure 5 Dredge borrow pit in H11806 on Chart 11358

Corrections to Echo Soundings

Refer to the OPR-K977-FU-08 Data Acquisition and Processing Report* for a detailed description of all corrections to echo soundings and lead line measurements. No deviations from the report occurred.

Data Processing

Refer to the OPR-K977-FU-08 Data Acquisition and Processing Report* for a detailed description of the processing flow.

The final mosaics for H11806 are located in the provided Sidescan Sonar Mosaics directory. These demonstrate the 200% coverage requirements of OPR-K977-FU-08 were met (except as addressed above under data quality), and are divided into 100% coverage sets as required in the Specifications and Deliverables. To keep file sizes reasonable the survey sheet was divided into three survey blocks. The geotifs and accompanying CARIS fieldsheets are named as follows:

SHT_C01_Coverage_1	Survey Block C01 Pass 1 (100% coverage from first pass)
SHT_C01_Coverage_2	Survey Block C01 Pass 2 (100% coverage from second pass)
SHT_C02_Coverage_1	Survey Block C02 Pass 1 (100% coverage from first pass)
SHT_C02_Coverage_2	Survey Block C02 Pass 2 (100% coverage from second pass)
SHT_C03_Coverage_1	Survey Block C03 Pass 1 (100% coverage from first pass)
SHT_C03_Coverage_2	Survey Block C03 Pass 2 (100% coverage from second pass)
SHT_C04_Coverage_1	Survey Block C04 Pass 1 (100% coverage from first pass)
SHT_C04_Coverage_2	Survey Block C04 Pass 2 (100% coverage from second pass)
SHT_C05_Coverage_1	Survey Block C05 Pass 1 (100% coverage from first pass)
SHT_C05_Coverage_2	Survey Block C05 Pass 2 (100% coverage from second pass)
SHT_C06_Coverage_1	Survey Block C06 Pass 1 (100% coverage from first pass)
SHT_C06_Coverage_2	Survey Block C06 Pass 2 (100% coverage from second pass)

The final S-57 file for this project is called “H11806_S57_Features.000”. This file contains all features, meta features, and bottom sample feature data for this project in S-57 format as required.

In CARIS HIPS, a fieldsheet was created and all final main scheme singlebeam data was gridded as a BASE surface (uncertainty mode) at 1m and 5m resolution. This fieldsheet is included and is called “H11806_Final”. In addition, a fieldsheet was created and all final verification multibeam data was gridded as a BASE surface (uncertainty mode) at 0.5m resolution. This fieldsheet is included and is called “H11806_Contacts_Final”.

An XYZ file containing soundings at a 5m interval was created by exporting the soundings out of CARIS HIPS to XYZ format, binning at 5 meters (shoal biased). This file is called “H11806_XYZ_Soundings_5m.txt”.

Included with survey deliverables.

Note that an S-57 file containing soundings is not included as per email instructions from the COTAR (see Appendix V – Supplemental Survey Records).*

C –Vertical & Horizontal Control ***See also the H-Cell Report.***

Refer to the OPR-K977-FU-08 Horizontal and Vertical Control Report* for a detailed description of the horizontal and vertical control used. No deviations from the report occurred. A summary of the project's horizontal and vertical control follows.

Horizontal Control

The horizontal control datum for this survey was the North American Datum of 1983 (NAD83). All real-time positioning as well as post-processed positioning was done in NAD83.

Vessel position was determined in real time using a Trimble Zephyr dual-frequency GPS antenna, which was connected to a Trimble BD950 dual-frequency GPS card in the POSMV. The POSMV was setup to accept USCG differential corrections, which were output from a CSI MBX-3S Coast Guard beacon receiver. Note: since the pseudorange corrections received by the POSMV are based on the NAD 83 position of the reference station antenna position, all real-time positions were NAD 83. The USCG DGPS stations used are show in the table below.

Table 2 – USCG DGPS Stations

Station	ID	Latitude	Longitude	Frequency	Tx. Rate
Mobile Point	813	30°13.7 N	88°01.4' W	300 kHz	100 bps
English Turn	814	29-52.7 N	89-56.5 W	293 kHz	200 bps

Real-time positions were replaced in processing with a post-processed kinematic (PPK) solution of higher accuracy (also in NAD83). For this purpose Fugro Pelagos, Inc. established two GPS base stations and logged dual-frequency GPS data continuously during survey operations with them. This control data was then used in conjunction with the raw GPS data logged aboard each vessel to create the PPK solution. Refer to the Data Acquisition and Processing Report* for more information concerning procedures used. Refer to the Horizontal and Vertical Control report* for base station descriptions.

Table 3 – Fugro Pelagos Base Stations

Station	ID	Latitude	Longitude	Height	Rec. Rate	Model
Receiver 0001	0001	29-12-57.77185 N	90-01-41.12387 W	-20.777 m	1 hz	Novatel DL4
Receiver 0004	0004	29-12-57.83000 N	90-01-41.18976 W	-20.714 m	1 hz	Novatel DL4

Positioning system confidence checks were conducted on a daily basis using the POS MV controller software. The controller software had numerous real time displays that were

Included with survey deliverables.

monitored throughout the survey to ensure the positional accuracies specified in the NOS Hydrographic Surveys Specifications and Deliverables (version May 2008) were achieved. These include, but are not limited to the following: GPS Status, Position Accuracy, Receiver Status (which included HDOP) and Satellite Status.

Since final positions were derived using the PPK process, as an independent check these positions were compared to positions determined in real time using DGPS (USCG). Agreement was well within specifications.

Vertical Control

The vertical control datum for this survey was mean lower low water (MLLW).

All sounding data were initially reduced to MLLW using observed tidal data from the tidal station located on Grand Isle, LA. During times of outage the nearby station at Port Fourchon, LA, was used. Both stations were owned and operated by the NOAA's National Ocean Service through the National Water Level Observation Program.

Table 4 - Tide Gauges

Gauge	Model	Gauge Type	Location	Latitude	Longitude	Operational
8761724	AquaTrak	Acoustic	Grand Isle, LA	29-15.8 N	89-57.4 W	N/A
8762075	AquaTrak	Acoustic	Port Fourchon, LA	29-06.8 N	90-11.9 W	N/A

Table 5 - Final Tide Zones

Zone	Gauge	Primary or Secondary	Time Offset	Range Ratio
CGM364	8761724	PRIM	-36	1.27
CGM369	8761724	PRIM	-42	1.27
CGM376	8761724	PRIM	-18	0.99
CGM377	8761724	PRIM	-30	0.99
CGM378	8761724	PRIM	-36	0.99
CGM380	8761724	PRIM	-24	1.08
CGM381	8761724	PRIM	-30	1.08
CGM382	8761724	PRIM	-42	1.08
CGM384	8761724	PRIM	-30	1.18
CGM385	8761724	PRIM	-36	1.18
CGM386	8761724	PRIM	-42	1.18
CGM389	8761724	PRIM	-36	1.27
CGM390	8761724	PRIM	-36	1.27
CGM391	8761724	PRIM	-42	1.32
CGM394	8761724	PRIM	-30	1.27
CGM400	8761724	PRIM	-24	1.18
CGM406	8761724	PRIM	-12	0.99
CGM364	8762075	SEC	-6	1.09
CGM369	8762075	SEC	-6	1.09

Zone	Gauge	Primary or Secondary	Time Offset	Range Ratio
CGM376	8762075	SEC	12	0.85
CGM377	8762075	SEC	6	0.85
CGM378	8762075	SEC	-6	0.85
CGM380	8762075	SEC	6	0.93
CGM381	8762075	SEC	0	0.93
CGM382	8762075	SEC	-6	0.93
CGM384	8762075	SEC	6	1.01
CGM385	8762075	SEC	-6	1.01
CGM386	8762075	SEC	-12	1.01
CGM389	8762075	SEC	0	1.09
CGM390	8762075	SEC	-6	1.09
CGM391	8762075	SEC	-12	1.13
CGM394	8762075	SEC	0	1.09
CGM400	8762075	SEC	6	1.01
CGM406	8762075	SEC	18	0.85

Observed tidal data was assembled from the National Water Level Observation Program accessed through the NOAA tides and currents website (http://tidesandcurrents.noaa.gov/). A cumulative file for the gauge in use was updated daily by appending the new data as it became available.

On April 12, 2009, verified tide data was acquired from the National Water Level Observation Program accessed through the NOAA tides and currents website (http://tidesandcurrents.noaa.gov/). The verified data was smoothed and applied to all sounding data in CARIS HIPS using tidal zones provided by NOAA. All sounding data was then remerged. The Grand Isle, LA (8761724) was used as the primary tidal station while Port Fourchon (8762075) was used as the secondary tidal station. Verified tidal data were used for all final Navigation Base Surfaces, soundings, and S-57 Feature files.
Verified tides and zoning were applied during field processing.

Refer to the Vertical and Horizontal Control Report* for additional tidal information, station descriptions and unusual conditions encountered throughout the project.

Included with survey deliverables.

D – Results and Recommendations *See also H-Cell Report.*

Chart Comparison

H11806 survey was compared with charts:

Chart Number	Scale	Edition	Edition Date
11358 (raster and ENC)	1:80,000	54th	Feb. 2007
11352	1:175,000	40th	May 2008
11365	1:50,000	20th	Feb. 2008
11366	1:250,000	12th	April 2009

Comparison of Soundings

For chart comparison, the main scheme singlebeam data was used to generate shoal biased soundings and contours in CARIS Fieldsheet Editor, and overlaid on the latest edition charts. The soundings and contours were then compared to those as charted.

General agreement was found between charted soundings and soundings acquired during the survey. Most soundings agree to within 1-3 feet, and this disagreement trends towards deeper depths for this survey then charted. Exceptions are noted below.

1. Depth of 20 ft found in the vicinity of charted 24 ft sounding (Chart 11358) at 29-13-31.14 N, 89-55-06.86 W ***Concur.***
2. Depth of 16 ft found in the vicinity of charted 22 ft sounding (Chart 11358) at 29-13-50.33 N, 89-55-04.55 W ***Concur.***
3. Depth of 12 ft found in the vicinity of charted 17 ft sounding (Chart 11358) at 29-14-15.46 N, 89-55-02.09 W ***Concur.***
4. Depth of 16 ft found in the vicinity of charted 21 ft sounding (Chart 11358) at 29-14-10.05 N, 89-54-42.98 W ***Concur.***
5. Depth of 22 ft found in the vicinity of charted 28 ft sounding (Chart 11358) at 29-14-12.69 N, 89-53-42.98 W ***Concur.***
6. Depth of 21 ft found in the vicinity of charted 26 ft sounding (Chart 11358) at 29-14-38.02 N, 89-53-38.90 W ***Concur.***
7. Depth of 12 ft found in the vicinity of charted 16 ft sounding (Chart 11358) at 29-15-36.99 N, 89-54-27.04 W ***Concur.***
8. Depth of 11 ft found in the vicinity of charted 15 ft sounding (Chart 11358) at 29-15-44.29 N, 89-54-45.68 W ***Concur.***
9. Depths in northeastern section of the survey area (east of 89-49-52 W and north of 29-17-32 N) were found to be significantly deeper (6-7 ft) than the charted soundings (Chart 11358) in this area. ***Concur.***
10. Depth of 10 ft found in the vicinity of charted 24 ft sounding (Chart 11358) at 29-18-16.22 N, 89-50-55.06 W. Note the 9 ft shoal area just north of this sounding was reported as a DtoN (H11806 DtoN Fugro 061709). ***Concur – See Appendix I for final charting recommendation on DTON.***

Note that most crosslines for this project were run inshore past the edge of the main scheme survey area, terminating in around eight feet of water. This was done to provide the approximate position of the depth contours inshore of the survey limit. As this data was not

main scheme, it is not included in the accompanying fieldsheet or XYZ file; however, it is available within the CARIS project if required. ***Concur.***

Automated Wreck and Observation Information System

There were 17 AWOIS items assigned to H11806. The results of each investigation are itemized below.

1. AWOIS item 374, "Last Chance", charted at 29-18-00.8 N, 89-49-00.24 W (shown as a "PA" Wreck on Chart 11358) was found by this survey approximately ~~500~~ ***690*** meters east of charted location at 29-18-04.15 N, 89-48-34.71 W. The item was investigated by survey vessel and a small portion of the wreck was noted and photographed as exposed. Recommend removing as charted and charting as portrayed in the accompanying S-57 feature file at updated position. ***Concur with clarification – Delete dangerous sunken wreck, PA. Add dangerous sunken wreck in present survey location.***

2. AWOIS item 364, "Pearl Harbor", at 29-15-58.81 N, 89-49-26.25 W (shown as a 22 ft rep wreck on Chart 11358) was not found by this survey. The area received 200% sidescan coverage with no sign of a wreck or obstruction. Recommend update to AWOIS database and recommend removal from chart. ***Concur – Delete dangerous sunken wreck (22 ft rep).***

3. AWOIS item 358, "Tony S", at 29-15-00.81 N, 89-50-00.25 W (shown as a "PA" Wreck on Chart 11358) was not found by this survey. The area received 200% sidescan coverage with no sign of a wreck or obstruction. Recommend update to AWOIS database and recommend removal from chart. ***Concur – Delete dangerous sunken wreck, PA.***

4. AWOIS item 361, "Barbara Jean", at 29-15-36.81 N, 89-51-36.25 W (shown as a Wreck on Chart 11358) was not found by this survey. The area received 200% sidescan coverage with no sign of a wreck or obstruction. Recommend update to AWOIS database and recommend removal from chart. ***Concur– Delete dangerous sunken wreck.***

5. AWOIS item 14267, "Little General I", at 29-09-30 N, 89-53-00 W (shown as a "PA" Wreck on Chart 11358) was not found by this survey. The area received 200% sidescan coverage with no sign of a wreck or obstruction. Survey bounds only extended 100m to the north of the AWOIS location leaving the possibility of the wreck lying outside the survey area. Recommend further investigation and retaining as charted. ***Concur - Retain charted dangerous sunken wreck, PA.***

6. AWOIS item 14266, "Rig Pool Ranger IV", at 29-10-54 N, 89-53-12 W (shown as "PA" cov 30 ft Wreck on Chart 11358) was not found by this survey. The area received 200% sidescan coverage with no sign of a wreck or obstruction.

Recommend update to AWOIS database and recommend removal from chart. ***Concur – Delete dangerous sunken wreck, PA (cov 30 ft).***

7. AWOIS item 14265, "Obstruction", at 29-11-13.33 N, 89-53-20.25 W (shown as "Obstn Fish Haven" auth min 30 ft on Chart 11358) was confirmed by this survey. The area received 200% sidescan coverage with many fish derricks noted within the obstruction area bounds and a least depth of 7.90m (25.9ft). Recommend update to AWOIS database and revising obstruction's least depth as depicted in the S-57 feature file. ***Concur with clarification – Could not find depth of 25.9 ft in the Obstn Fish Haven area during office processing. Retain Obstn Fish Haven (auth min 27 ft) as charted.***

8. AWOIS item 13445, "Obstruction", at 29-13-48 N, 89-53-24 W (shown as "Subm pipe" 15 ft rep PA on Chart 11358) was not found by this survey. The area received 200% sidescan coverage with no sign of a pipe or other obstruction. Recommend update to AWOIS database and recommend removal from chart. ***Concur – Delete Subm pipe (15 ft rep), PA.***

9. AWOIS item 13451, "Obstruction", at 29-14-00 N, 89-54-00 W (shown as "Obstn rep PA" on Chart 11358) was not found by this survey. The area received 200% sidescan coverage with no sign of an obstruction. Recommend update to AWOIS database and recommend removal from chart. ***Concur – Delete Obstn Rep, PA.***

10. AWOIS item 13446, "Wilma G", at 29-14-30 N, 89-54-00 W (shown as "PA" Wreck on Chart 11358) was not found by this survey. The area received 200% sidescan coverage with no sign of an ~~obstruction~~ ***wreck***. Recommend update to AWOIS database and recommend removal from chart. ***Concur - Delete dangerous sunken wreck, PA.***

11. AWOIS item 13450, "Obstruction", at 29-14-17 N, 89-54-51 W (shown as Obstn ED on Chart 11358) was not found by this survey. The area received 200% sidescan coverage with no sign of an obstruction. Recommend update to AWOIS database and recommend removal from chart. ***Concur – Delete Obstn, ED.***

12. AWOIS item 13459, "Obstruction", at 29-15-00 N, 89-54-48 W (shown as Obstn PA on Chart 11358 at position 250m WNW of AWOIS position) was not found by this survey. The area received 200% sidescan coverage with no sign of an obstruction. Recommend update to AWOIS database and recommend removal from chart. ***Concur – Delete Obstn, PA.***

13. AWOIS item 13447, "Obstruction", at 29-15-18 N, 89-55-30 W (shown as Obstn PA on Chart 11358) was confirmed by this survey. A small contact (height of 0.5 m off seafloor) was detected by 200% sidescan coverage at this position. Recommend charting at AWOIS position as depicted in the S-57 feature file (note that charted position is approximately 100 m NW of true/AWOIS position) and update to AWOIS

database. ***Do not concur - Item determined insignificant during office processing. Delete Obstn, PA. Do not chart above discussed obstruction.***

14. AWOIS item 13449, "Dena Allyson", at 29-15-30.82 N, 89-56-12.26 W (shown as PD Wreck on Chart 11358) was not found by this survey. The area received 200% sidescan coverage with no sign of an ~~obstruction~~ ***wreck***. Recommend update to AWOIS database and recommend removal from chart. ***Concur – Delete dangerous sunken wreck, PD.***

15. AWOIS item 14272, "Obstruction", at 29-17-02.90 N, 89-53-42.00 W (shown as "PA" Obstruction on Chart 11358) was not investigated. The position was outside the survey limits in shallow water. Recommend further investigation. ***Concur - Retain Obstn, PA.***

16. AWOIS item 368, "Unknown" vessel, at 29-17-18.N, 89-53-02.05W (shown as "PA" Wreck on Chart 11358) was not found by this survey. The area received 200% sidescan coverage with no sign of an obstruction or wreck. Survey bounds only extended 130m to the north of the AWOIS location leaving the possibility of the wreck lying outside the survey area. Recommend further investigation and retaining as charted. ***Concur with clarification – Wreck investigation was not completely covered. Retain charted dangerous sunken wreck, PA.***

17. AWOIS item 14271, "Obstruction", at 29-17-40.5 N, 89-52-32.7 W (shown as "Obstn rep PA" on Chart 11358) was not investigated. The position was outside the survey limits in shallow water. Recommend further investigation. ***Concur - Retain Obstn rep, PA.***

18. All charted features within the extents of survey H11806 (see Table of Charts) were investigated. All submerged features received 200 percent sidescan coverage with a Klein 3000 Sidescan Sonar. All surface charted features were also investigated visually. Positioning and descriptions of surface features were acquired and logged using the POSMV DGPS positioning and WinFrog v3.08.23. ***Concur***

Note that the contacts found by sidescan during this project are listed in Separate V (Sidescan Contact List). These contacts were submitted weekly to the government during the course of the project and are subject to removal as possible hurricane debris. All contacts determined to be significant nature have been depicted in the S-57 feature file and commented on below. All contacts found to be dangers to navigation were submitted to AHB and can be found in Appendix I. ***Concur.***

1. Charted platform at 29-09-56.04 N, 89-54-13.62 W (Chart 11358) was not found by this survey. During feature verification, the platform was not observed and 200% sidescan coverage does not indicate a feature. Recommend removal from chart. ***Concur – Delete platform.***

2. Charted platform at 29-09-55.84 N, 89-53-14.5 W (Chart 11358) was found by this survey but at a position approximately 275 m NNE (actual position 29-10-04.293 N,

89-53-10.804 W). Recommend removing as charted and charting platform at actual position, as portrayed in the accompanying S-57 feature file. ***Concur – Delete charted platform. Add platform.***

3. Charted platform at 29-12-24.26 N, 89-52-29.68 (Chart 11358) was not found by this survey. During feature verification, the platform was not observed and 200% sidescan coverage does not indicate a feature. Recommend removal from chart. ***Concur – Delete platform.***

4. Charted platform at 29-10-37.82 N, 89-52-28.48 W (Chart 11358) was found to be correctly charted by this survey. During feature verification, the platform was observed through both visual verification and 200% sidescan coverage. Recommend retaining as charted. ***Concur with clarification – Delete charted platform. Add platform.***

5. Charted platform at 29-10-02.30 N, 89-54-05.20 W (Chart 11358) was found to be correctly charted by this survey. During feature verification, the platform was observed through both visual verification and 200% sidescan coverage. Recommend retaining as charted. ***Concur with clarification - Delete charted platform. Add platform.***

6. Charted platform at 29-10-02.01 N, 89-54-02.99 W (Chart 11358) was found to be correctly charted by this survey. During feature verification, the platform was observed through both visual verification and 200% sidescan coverage. Recommend retaining as charted. ***Concur with clarification - Side scan shows this item to be the same as item #5 above. See item #5 above for final charting recommendation.***

7. Charted platform at 29-10-45.81 N, 89-53-16.50 W (Chart 11358) was found to be correctly charted by this survey. During feature verification, the platform was observed through both visual verification and 200% sidescan coverage. Recommend retaining as charted. ***Concur with clarification – Delete charted platform. Add platform.***

8. Charted platform at 29-10-52.70 N, 89-53-38.00 W (Chart 11358) was found to be correctly charted by this survey. During feature verification, the platform was observed through both visual verification and 200% sidescan coverage. Recommend retaining as charted. ***Concur with clarification – Delete charted platform. Add platform.***

9. Charted platform at 29-10-48.30 N, 89-53-43.40 W (Chart 11358) was found to be correctly charted by this survey. During feature verification, the platform was observed through both visual verification and 200% sidescan coverage. Recommend retaining as charted. ***Concur with clarification – Delete charted platform. Add platform.***

10. Charted platform at 29-10-59.00 N, 89-54-44.00 W (Chart 11358) was found to be correctly charted by this survey. During feature verification, the platform was

observed through both visual verification and 200% sidescan coverage. Recommend retaining as charted. ***Concur with clarification – Delete charted platform. Add platform.***

11. Charted platform at 29-16-22.70 N, 89-54-01.92 W (Chart 11358) was found to be correctly charted by this survey. During feature verification, the platform was observed through both visual verification and 200% sidescan coverage. Recommend retaining as charted. ***Concur with clarification – Delete charted platform. Add platform.***

12. Charted "Dump Site" area, and "Discont'd Dump Site", in the vicinity of 29-14-49 N, 89-54-21 W (Chart 11358), were not found by this survey. Depths within the extents of the dump site area were not found to differ from depths immediately outside the area. Recommend removal of these features from the chart. ***Do nor concur – Retain as charted the two Dump Sites. Revise text (Depths from survey of 1934) to (Depths from surveys of 1934 and 2008-2009). Defer to MCD for final charting recommendations.***

13. Charted "Pipe" at 29-09-23.87 N, 89-53-54.71 W (Chart 11358) is a product of a DtoN submission by this survey (Report "H11806 DtoN Fugro 121908_1"). AHB had requested further information be obtained and included in the DR about this feature. The feature is a wellhead with an estimated height of -10m above MHW. A photo of the feature follows. ***Concur with clarification – Delete pipe. Add*** **Obstn (wellhead).**

Figure 6 Item number 5, exposed wellhead

Remaining charted features are discussed in the next section.

Features labeled PA, ED, PD, or Rep. not already addressed as AWOIS:

Many PA, ED, PD, or Rep. features were also AWOIS items and are addressed in the AWOIS section. Those not previously discussed are itemized here.

1. "Obstn (rep 2009)" with a depth of 22 ft at 29-09-37 N, 089-53-19 W (Chart 11358) was a product of a DtoN submitted during this survey (Report "H11806 DtoN Fugro 011209"). Feature was confirmed by multibeam and found to have a least depth of 11.19m (36.7). Recommend revising obstruction's least depth as depicted in the S-57 feature file. ***See Appendix I for final charting recommendation.***

2. "Obstn (Exposed pipeline rep 1 ft above MHW)" at 29-16-08 N, 89-53-54 W (Chart 11358) was a product of a DtoN submitted during this survey (Report "H11806 DtoN Fugro 161108"). Recommend retaining as charted. ***See Appendix I for final charting recommendation.***

3. "Obstn (rep 1990)" with a depth of 28 ft at 29-12-20 N, 89-53-34 W (Chart 11358) was a product of a DtoN submitted during this survey (Report "H11806 DtoN Fugro 241108_2"). Feature was confirmed by multibeam and found to have a least depth of 9.80m (32.2ft). In addition, the chart notes "rep 1990" as it should say "rep 2008". Recommend revising obstruction's least depth as depicted in the S-57 feature file and correcting reported date. ***See Appendix I for final charting recommendation.***

4. "Obstn (rep 2008)" with a depth of 38 ft at 29-10-32 N, 89-54-04 W (Chart 11358) was a product of a DtoN submitted during this survey (Report "H11806 DtoN Fugro 112508_2"). Following a multibeam search of the area, the feature was found to be a seabed depression and not a hazard to navigation. Recommend removal from chart. ***See Appendix I for final charting recommendation.***

5. "Obstn (rep 2008)" with a depth of 43 ft at 29-10-50 N, 89-52-36 W (Chart 11358) was a product of a DtoN submitted during this survey (Report "H11806 DtoN Fugro 112508_3"). Feature was confirmed by multibeam and found to have a least depth of 13.19m (43.2ft). Recommend retaining as charted. ***See Appendix I for final charting recommendation.***

6. "Obstn (rep 2008)" with a depth of 11 ft at 29-15-22 N, 89-52-53 W (Chart 11358) was a product of a DtoN submitted during this survey (Report "H11806 DtoN Fugro 112508_4"). Feature was confirmed by multibeam and found to have a least depth of 5.07m (16.6ft). Recommend revising obstruction's least depth as depicted in the S-57 feature file. ***See Appendix I for final charting recommendation..***

7. "Obstn (rep 2008)" with a depth of 18 ft at 29-17-00 N, 89-49-23 W (Chart 11358) was a product of a DtoN submitted during this survey (Report "H11806 DtoN Fugro 112708_1"). Feature was confirmed by multibeam and found to have a least depth of

6.12m (20.1ft). Recommend revising obstruction's least depth as depicted in the S-57 feature file. ***See Appendix I for final charting recommendation.***

8. "Shoaling to 10 ft rep 2007 PA" at 29-17-47.81 N, 89-49-17.93 W (Chart 11358) was not observed by this survey. No obstructions were detected with 200% sidescan coverage and singlebeam data indicated no shoal. Recommend removal from chart. ***Concur – Delete text Shoaling to 10 ft rep 2007, PA. Chart present survey depths.***

9. A new obstruction with a multibeam least depth of 10.50m (34.5ft) at 29-11-29 N, 89-53-50 W was a product of a DtoN submitted during this survey (Report "H11806 DtoN Fugro 241108_1"). Recommend placing on chart as depicted in the S-57 feature file. ***Do not concur – Obstruction with a depth of 34 feet in latitude 29-11-29.01"N, longitude 089-53-49.92"W is on the edge of a charted Obstn Fish Haven (auth min 27 ft). It is recommended that the 34 Obstn not be charted. Chart present survey depths.***

Dangers to Navigation

Dangers to Navigation were submitted between November 16th, 2008 and June 17th of 2009 (See Appendix I for Specific Reports).

DtoN "H11806 DtoN Fugro 280808.pdf", an uncharted navigation buoy, was removed over the course of the survey operation. AHB and the COTAR were informed of the change in status of the reported DtoN as no longer a hazard to navigation. (See Appendix V Supplemental Survey Records). ***Concur – Appendix V is attached to the this report.***

DtoN "H11806 DtoN Fugro 112508_1.pdf", an exposed pipeline, was not submitted as an obstruction nor depicted in the S-57 feature file. As per instructions received in email "Field unit DtoN selection in regard to Marine Chart Division application 022609" exposed pipelines and cables found on top of already charted pipeline or cable routes are not to be submitted as charted obstructions. (See Appendix V Supplemental Survey Records). ***Concur - Appendix V is attached to the this report.***

Bottom Samples

The R/V Chinook was fitted to obtain bottom samples as specified in the Statement of Work. The purpose of this was to characterize H11806 for general bottom classification.

Samples were taken with a Van Veen grab sampler and position was recorded with WinFrog v3.08.23. Sediment retrieved from the sampler was examined and then encoded with the appropriate S-57 attributes. Samples were then photographed and discarded (retaining the samples was not required per instructions from the COTR). Positions and descriptions of all samples are found in Appendix V* and in the H11806_S57_Features file. ***Concur.***
****Included with survey deliverables.***

Aids to Navigation

The R/V Chinook investigated all charted Aids to Navigation as specified in the Statement of Work. Positions were recorded and descriptions were logged using WinFrog v3.08.23. All Aids to Navigation surveyed in H11806 were compared to current charts and Light List Volume IV to ensure they are undamaged and serving their intended purpose.

All dangers to navigation were confirmed to be at their charted position and to be undamaged and serving their intended purpose except those itemized below.

1. Aid to Navigation RW "BP" Mo (A) Whistle at 29-14-00.30 N, 89-54-07.75 W (Chart 11358, light list 500 / 15320) was not found by this survey at charted location. The buoy was visible washed up on the nearby beach. The Coast Guard station in Grand Isle was informed. ***Not shown on Chart # 13258, 55th. Edition, 20090601. No change in charting is recommended.***

2. Aid to Navigation Art "FRLA-27-D" Fl Y 4s Priv at 29-10-57.12 N, 89-53-20.32 W (Chart 11358, light list 513.3) was not found by this survey. Recommend removal from chart. ***Concur with clarification – Defer to MCD Source Data Branch for charting recommendation.***

Uncharted Aids to Navigation

The following uncharted Aids to Navigation were found within the survey extents.

1. A new Aid to Nav was located at 29-10-58.14 N, 89-53-10.97 W, marking the southern edge of the Fish Haven Obstruction Area. It is portrayed in the accompanying S-57 feature file as a BCNSPP / LIGHTS object. ***Concur – Add light.***

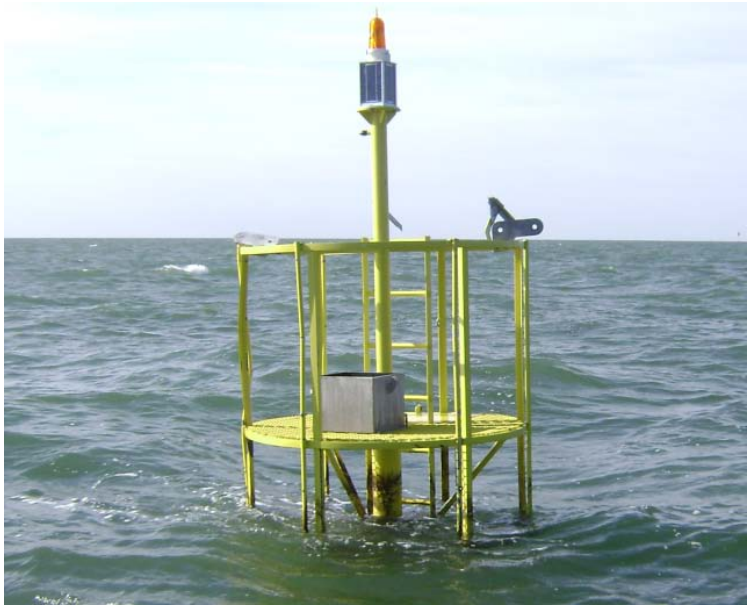


Figure 7 New Aid to Navigation

E – Approval Sheet

Approval Sheet

For

H11806

Standard field surveying and processing procedures were followed in producing this survey in accordance with the following documents:

OPR-K977-FU-08 Statement of Work
NOS Hydrographic Surveys Specifications and Deliverables (May 2008)
Fugro Pelagos, Inc. Acquisition Procedures (2008-NOAAAcquisitionProcedures);
Fugro Pelagos, Inc. Processing Procedures (2008-NOAAProcessingProcedures);

The data were reviewed daily during acquisition and processing.

This report has been reviewed and approved. All records are forwarded for final review and processing to the Chief, Atlantic Hydrographic Branch.

Approved and forwarded,

11/16/2009

X 

David D. Briggs
Lead Hydrographer
Fugro Pelagos, Inc. Survey Party

H11806 DtoN#2-3

Registry Number: H11806
State: Louisiana
Locality: Gulf of Mexico
Sub-locality: Vicinity of Quatre Bayou Pass
Project Number: OR-K977-FU-08
Survey Dates: 08/27/2008 - 11/09/2008

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11365	20th	02/01/2008	1:50,000 (11365_1)	[L]NTM: ?
11358	54th	02/01/2007	1:80,000 (11358_1)	USCG LNM: 11/04/2008 (11/04/2008) NGA NTM: 04/28/2007 (11/15/2008)
11364	42nd	09/01/2007	1:80,000 (11364_1)	[L]NTM: ?
11352	40th	05/01/2008	1:175,000 (11352_1)	[L]NTM: ?
11366	11th	01/01/2008	1:250,000 (11366_1)	[L]NTM: ?
11340	72nd	07/01/2007	1:458,596 (11340_1)	[L]NTM: ?
1116A	72nd	07/01/2007	1:458,596 (1116A_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	38-ft Obstruction DtoN #2.2	GP	11.70 m	29° 10' 32.4" N	089° 54' 04.3" W	---
1.2	43-ft Obstruction DtoN # 2.3	GP	13.07 m	29° 10' 50.4" N	089° 52' 35.6" W	---
1.3	11-ft Obstruction DtoN# 2.4	GP	3.50 m	29° 15' 22.1" N	089° 52' 53.2" W	---
1.4	18-ft Obstruction DtoN #3.1	GP	5.45 m	29° 16' 59.9" N	089° 49' 23.3" W	---

1 - Danger To Navigation

1.1) 38-ft Obstruction DtoN #2.2

DANGER TO NAVIGATION

Survey Summary

Survey Position:	29° 10' 32.4" N, 089° 54' 04.3" W
Least Depth:	11.70 m (= 38.39 ft = 6.398 fm = 6 fm 2.39 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2008-241.00:00:00.000 (08/28/2008)
GP Dataset:	H11806_DtoN#2-3.xls
GP No.:	1
Charts Affected:	11358_1, 11352_1, 11366_1, 1116A_1, 11340_1, 11006_1, 411_1

Remarks:

Depths are reduced to Mean Lower Low Water using observed tides. Positions are based on the NAD83 horizontal datum.

A significant obstruction was found at this location. The object had an estimated height of 1.9ft, a length of 8.5ft, a width of 5.5ft, and an estimated clearance depth of 46.6ft, based on sidescan sonar data. The multibeam sonar data show the obstruction to be 8.5ft high with a clearance depth of 38.4ft. Chart 11358 shows no obstruction at this location. (FPI Contact Reference 2C01-22800001-M) The sidescan sonar image (speed corrected waterfall display) shows a 130X130ft area approximately centered at the location. The obstruction is the bright feature just to the right of center in the image. The multibeam bathymetry image shows the bathymetry over a 130X130ft area with the depth scale in meters. An excerpt from Chart 11358 is shown below, with a red arrow indicating the location of the obstruction (small cyan circle).

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11806_DtoN#2-3.xls	1	0.00	000.0	Primary

Hydrographer Recommendations

Chart 38-ft Obstruction.

Cartographically-Rounded Depth (Affected Charts):

38ft (11358_1, 11352_1)

6 ¼fm (1116A_1, 11340_1, 11006_1, 411_1)

6fm 2ft (11366_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:

QUASOU - 6:least depth known

SORDAT - 20080828

SORIND - US,US,survy,H11806

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

VALSOU - 11.7 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Least depth revised to 40 ft duirng office processing. Delete charted 38 Obstn (rep 2008) and danger curve. Add 40 Obstn and danger curve.

Feature Images

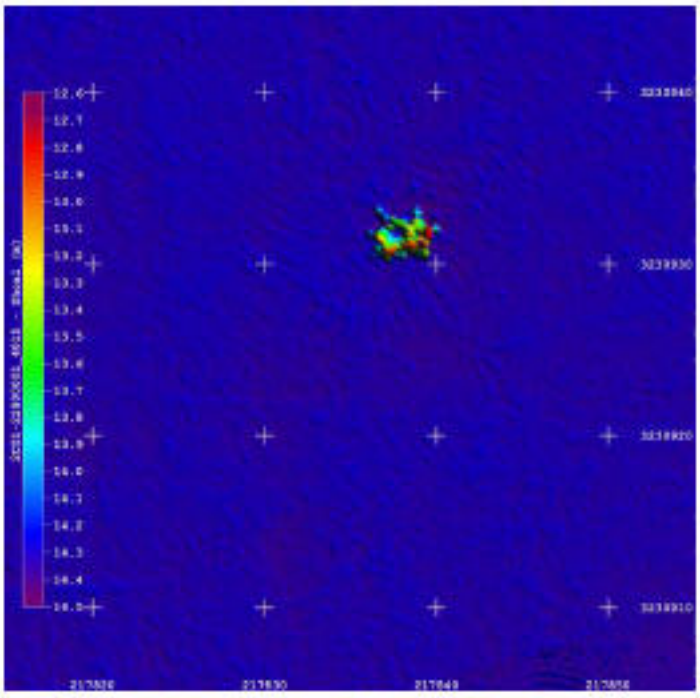


Figure 1.1.1

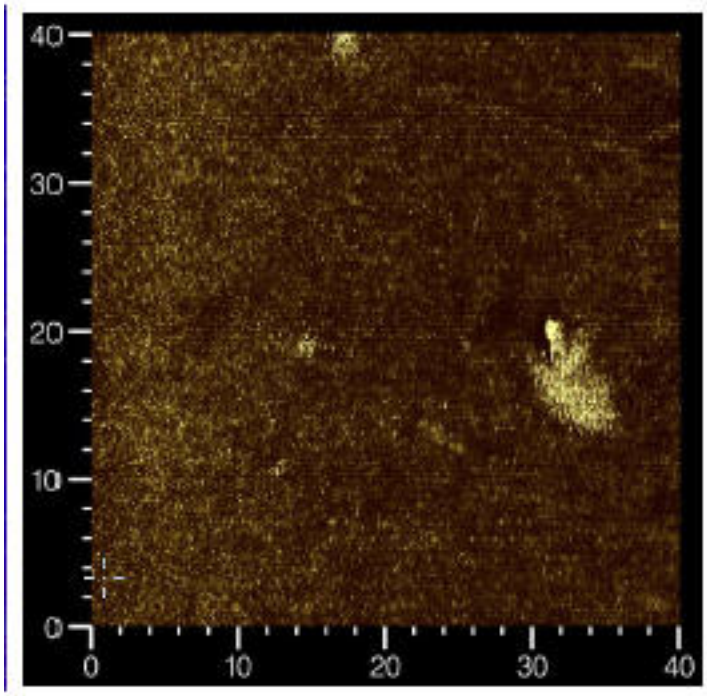


Figure 1.1.2

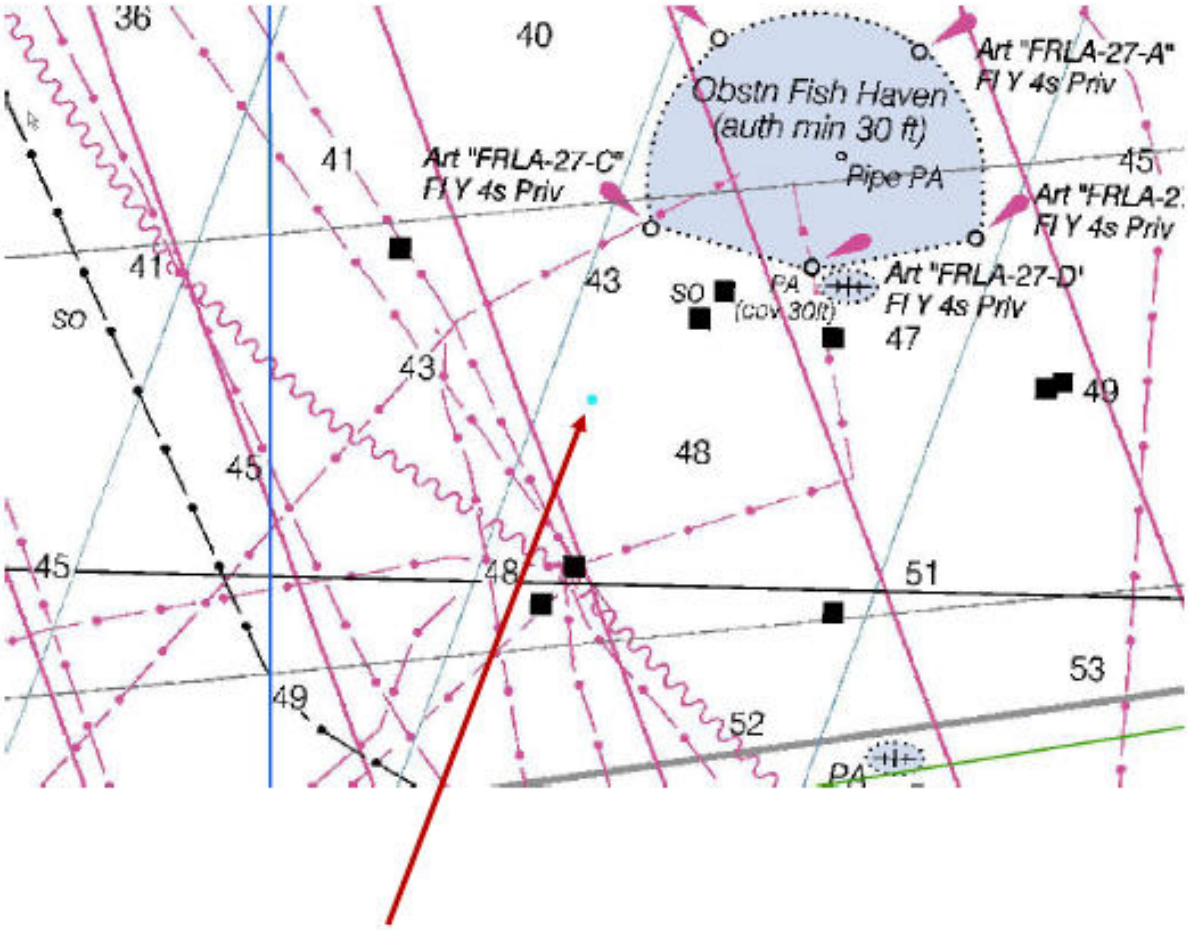

36
40
Art "FRLA-27-A"
Fl Y 4s Priv
Obstn Fish Haven
(auth min 30 ft)
Pipe PA
41
Art "FRLA-27-C"
Fl Y 4s Priv
45
Art "FRLA-2
Fl Y 4s Priv
41
43
SO
PA
(cov 30ft)
Art "FRLA-27-D"
Fl Y 4s Priv
47
SO
43
49
48
45
45
48
51
53
49
52
PA

Figure 1.1.3

1.2) 43-ft Obstruction DtoN # 2.3

DANGER TO NAVIGATION

Survey Summary

Survey Position:	29° 10' 50.4" N, 089° 52' 35.6" W
Least Depth:	13.07 m (= 42.88 ft = 7.147 fm = 7 fm 0.88 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2008-241.00:00:00.000 (08/28/2008)
GP Dataset:	H11806_DtoN#2-3.xls
GP No.:	2
Charts Affected:	11358_1, 11352_1, 11366_1, 1116A_1, 11340_1, 11006_1, 411_1

Remarks:

Depths are reduced to Mean Lower Low Water using observed tides. Positions are based on the NAD83 horizontal datum.

A significant obstruction was found at this location. The object appears to be a log or pipe section protruding from the seabed. The object had an estimated height of 9.4ft, a length of 11.6ft, a width of 0.5ft, and an estimated clearance depth of 41.0ft, based on sidescan sonar data. The multibeam sonar data show the obstruction to be 6.3ft high with a clearance depth of 42.9ft. Chart 11358 shows no obstruction at this location. (FPI Contact Reference 2C01-24000002-M) The sidescan sonar image (speed corrected waterfall display) shows a 130X130ft area approximately centered at the location. The obstruction is the bright linear feature with a dark narrow shadow trending to the upper right. The multibeam bathymetry image shows the bathymetry over a 130X130ft area with the depth scale in meters. An excerpt from Chart 11358 is shown below, with a red arrow indicating the location of the obstruction (small cyan circle).

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11806_DtoN#2-3.xls	2	0.00	000.0	Primary

Hydrographer Recommendations

Chart 43-ft Obstruction.

Cartographically-Rounded Depth (Affected Charts):

43ft (11358_1, 11352_1)

7fm (1116A_1, 11340_1, 11006_1, 411_1)

7fm 1ft (11366_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20080828
	SORIND - US,US,survy,H11806
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 13.07 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Least depth revised to 42 ft during office processing. Delete 43 Obstn and danger curve.

Add 42 Obstn and danger curve.

Feature Images

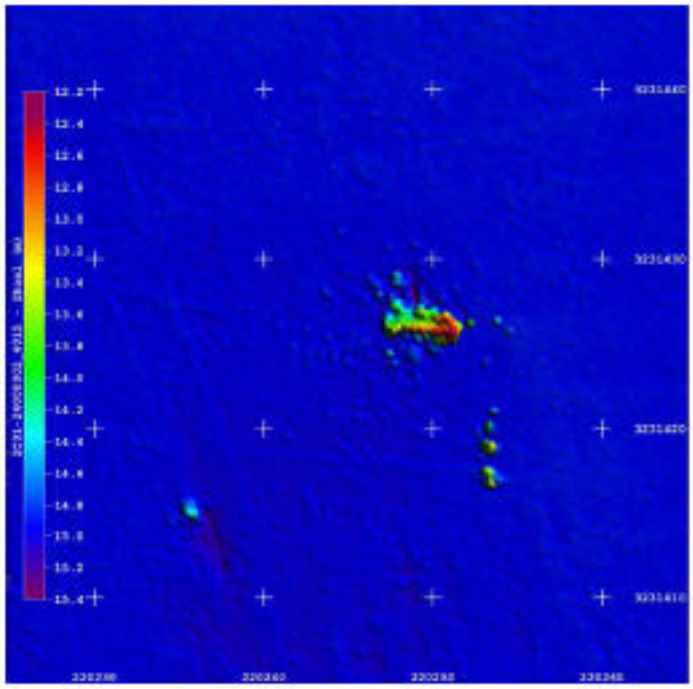


Figure 1.2.1

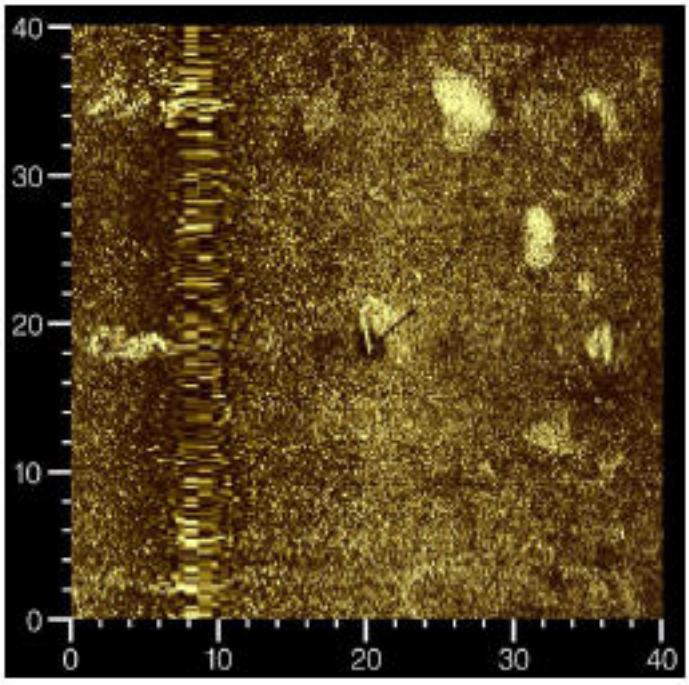


Figure 1.2.2

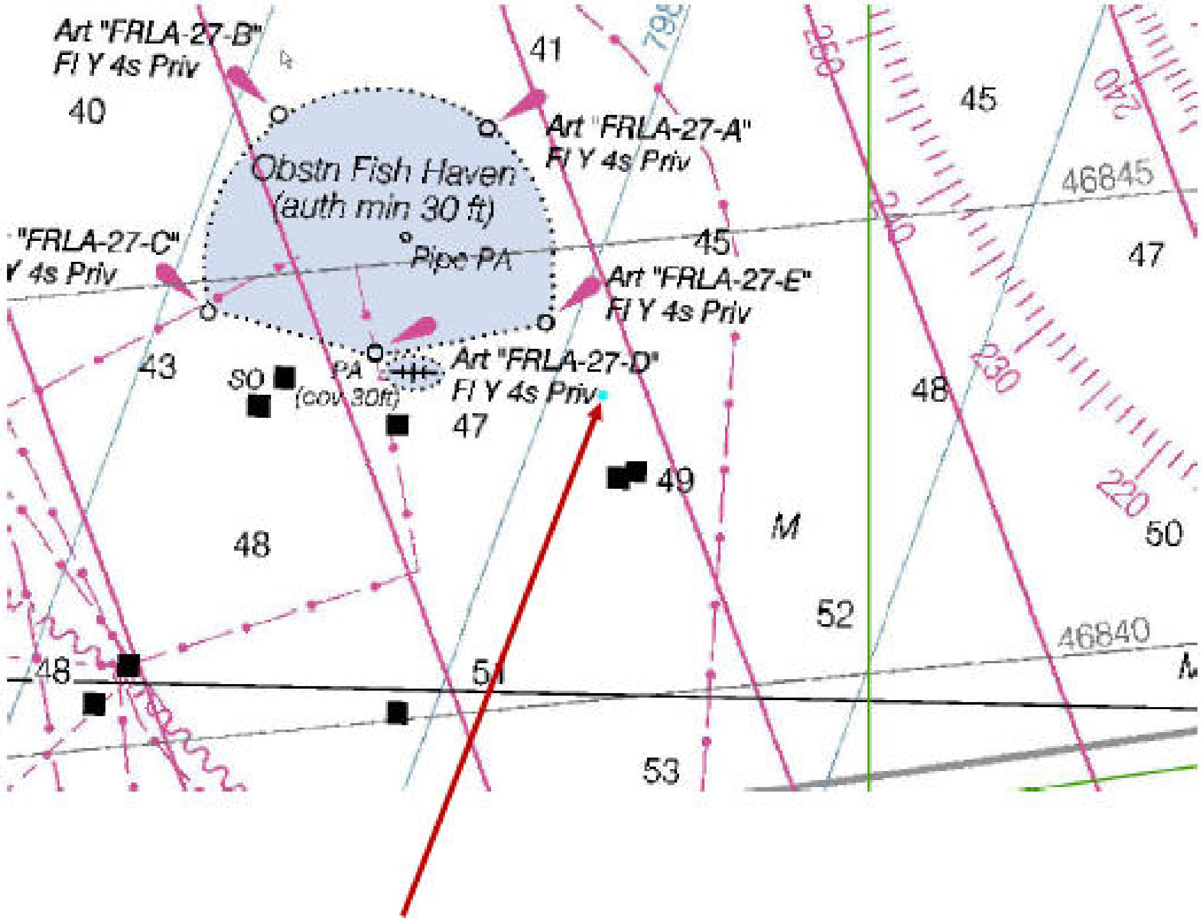

Art "FRLA-27-B"
Fl Y 4s Priv
Art "FRLA-27-A"
Fl Y 4s Priv
"FRLA-27-C"
Y 4s Priv
Obstn Fish Haven
(auth min 30 ft)
Pipe PA
Art "FRLA-27-E"
Fl Y 4s Priv
Art "FRLA-27-D"
Fl Y 4s Priv
SO
PA
(cov 30ft)
46845
46840
M

Figure 1.2.3

1.3) 11-ft Obstruction DtoN# 2.4

DANGER TO NAVIGATION

Survey Summary

Survey Position:	29° 15' 22.1" N, 089° 52' 53.2" W
Least Depth:	3.50 m (= 11.48 ft = 1.914 fm = 1 fm 5.48 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2008-240.00:00:00.000 (08/27/2008)
GP Dataset:	H11806_DtoN#2-3.xls
GP No.:	3
Charts Affected:	11365_1, 11358_1, 11352_1, 11366_1, 1116A_1, 11340_1, 11006_1, 411_1

Remarks:

Depths are reduced to Mean Lower Low Water using observed tides. Positions are based on the NAD83 horizontal datum.

A significant obstruction was found at this location. The object appears to be a loop of cable protruding from the seabed, with the rest of the cable buried. The object had an estimated height of 10.1ft, a length of 35.2ft, a width of 1.6ft, and an estimated clearance depth of 11.5ft, based on sidescan sonar data. The multibeam sonar data show the obstruction to be 4.5ft high with a clearance depth of 16.8ft. It should be noted that the multibeam data appears not to have captured the apex the apparent cable loop (note the gap in the feature in the multibeam data) and the cable may have been at a lower orientation as it may flex in the current. In this instance the clearance depth based on the sidescan sonar data is likely the more accurate, or conservative estimate. Chart 11358 shows no obstruction at this location. (FPI Contact Reference 2C01-37600001-M) The sidescan sonar image (speed corrected waterfall display) shows a 130X130ft area approximately centered at the location. The obstruction is the bright linear feature with a dark narrow shadow looping to the left. Note that the sidescan sonar data show another possible cable lying on the seabed (long linear feature to the right of the cable loop). The multibeam bathymetry image shows the bathymetry over a 130X130ft area with the depth scale in meters. An excerpt from Chart 11358 is shown below, with a red arrow indicating the location of the obstruction (small cyan circle).

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11806_DtoN#2-3.xls	3	0.00	000.0	Primary

Hydrographer Recommendations

Chart 11-ft Obstruction (Rep 2008).

Cartographically-Rounded Depth (Affected Charts):

11ft (11365_1, 11358_1, 11352_1)

1 ¾fm (1116A_1, 11340_1, 11006_1, 411_1)

1fm 5ft (11366_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 9:value reported (not confirmed)
	SORDAT - 20080827
	SORIND - US,US,survy,H11806
	TECSOU - 2,3:found by side scan sonar,found by multi-beam
	VALSOU - 3.5 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Do not concur - Least depth determined to be 16 ft during office processing. Delete 11 Obstn (rep 2008) and danger curve. Add 16 Obstn and danger curve.

Feature Images

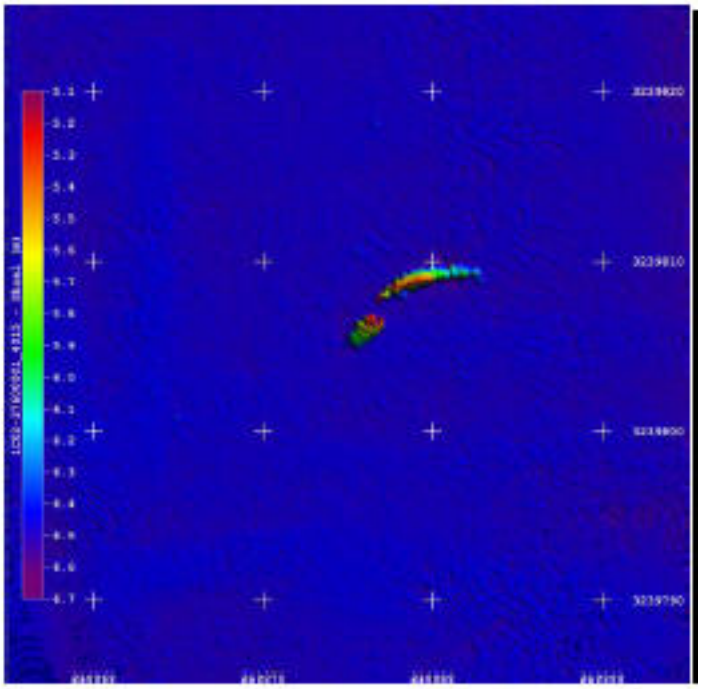


Figure 1.3.1

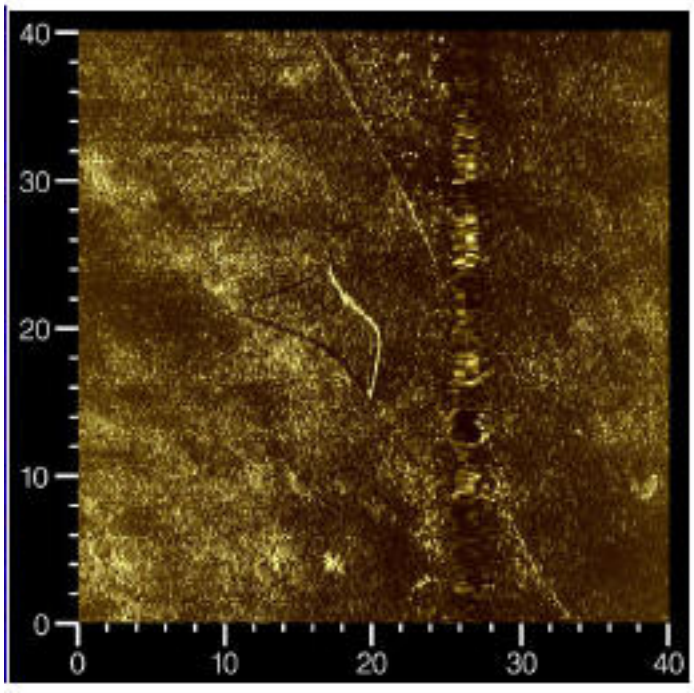


Figure 1.3.2

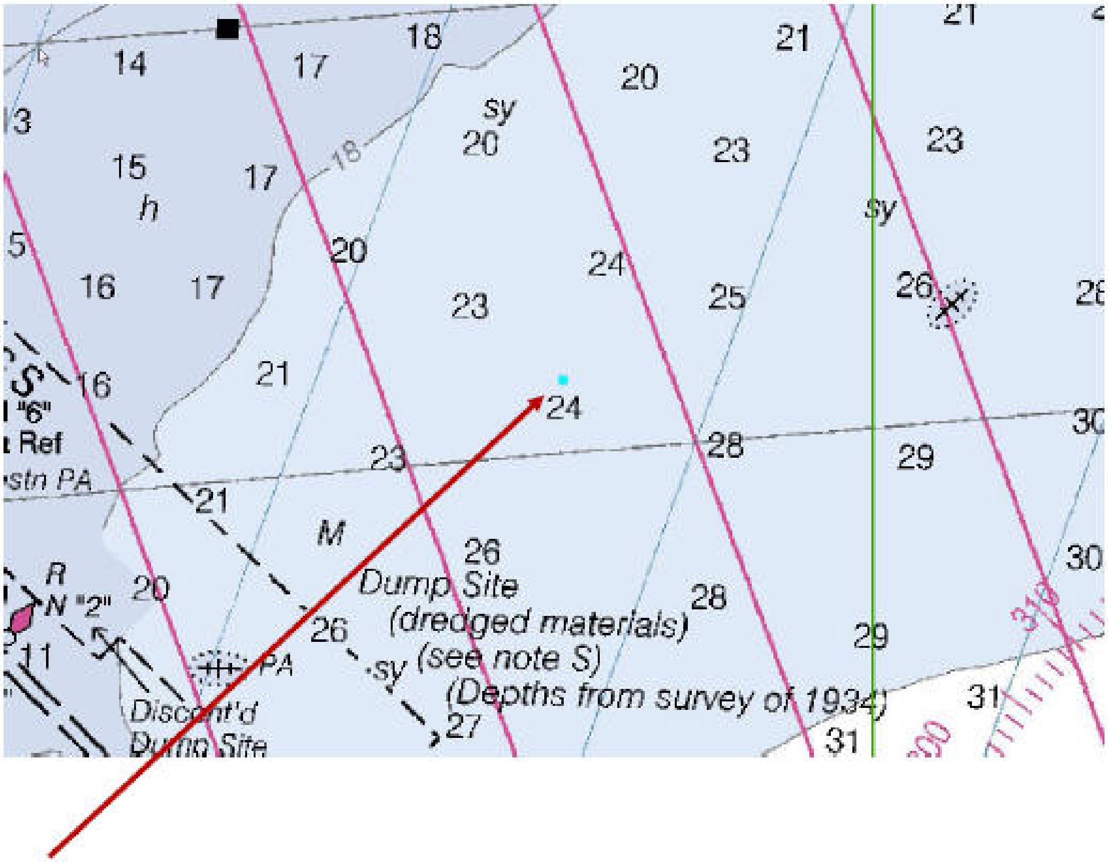

Dump Site
(dredged materials)
(see note S)
(Depths from survey of 1934)
Discont'd
Dump Site
Ref
PA
R
N "2"

Figure 1.3.3

1.4) 18-ft Obstruction DtoN #3.1

DANGER TO NAVIGATION

Survey Summary

Survey Position:	29° 16' 59.9" N, 089° 49' 23.3" W
Least Depth:	5.45 m (= 17.88 ft = 2.980 fm = 2 fm 5.88 ft)
TPU (±1.96σ):	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2008-314.00:00:00.000 (11/09/2008)
GP Dataset:	H11806_DtoN#2-3.xls
GP No.:	4
Charts Affected:	11358_1, 11364_1, 11352_1, 11366_1, 1116A_1, 11340_1, 11006_1, 411_1

Remarks:

Depths are reduced to Mean Lower Low Water using observed tides. Positions are based on the NAD83 horizontal datum.

A significant obstruction was found at this location. The object appears to be debris. The object had an estimated height of 3.1ft, a length of 31.6ft, a width of 9.9ft, and an estimated clearance depth of 19.4ft, based on sidescan sonar data. The multibeam sonar data show the obstruction to be 4.7ft high with a clearance depth of 17.9ft. Chart 11358 does not indicate an obstruction at this location. (FPI Contact Reference 1C04-57200002-M) The sidescan sonar image (speed corrected waterfall display) shows a 130X130ft area approximately centered at the location. The obstruction is the bright object with a shadow to the left. The multibeam bathymetry image shows the bathymetry over a 130X130ft area with the depth scale in meters. An excerpt from Chart 11358 is shown below, with a red arrow indicating the location of the obstruction (small cyan circle).

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11806_DtoN#2-3.xls	4	0.00	000.0	Primary

Hydrographer Recommendations

Chart 18-ft Obstruction.

Cartographically-Rounded Depth (Affected Charts):

18ft (11358_1, 11364_1, 11352_1)

3fm (1116A_1, 11340_1, 11006_1, 411_1)

3fm 0ft (11366_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:

QUASOU - 6:least depth known

SORDAT - 20081109

SORIND - US,US,survy,H11806

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

VALSOU - 5.45 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Least depth revised to 19 ft during office processing. Delete 18 Obstn (rep 2008) and danger curve. Add 19 Obstn and danger curve.

Feature Images

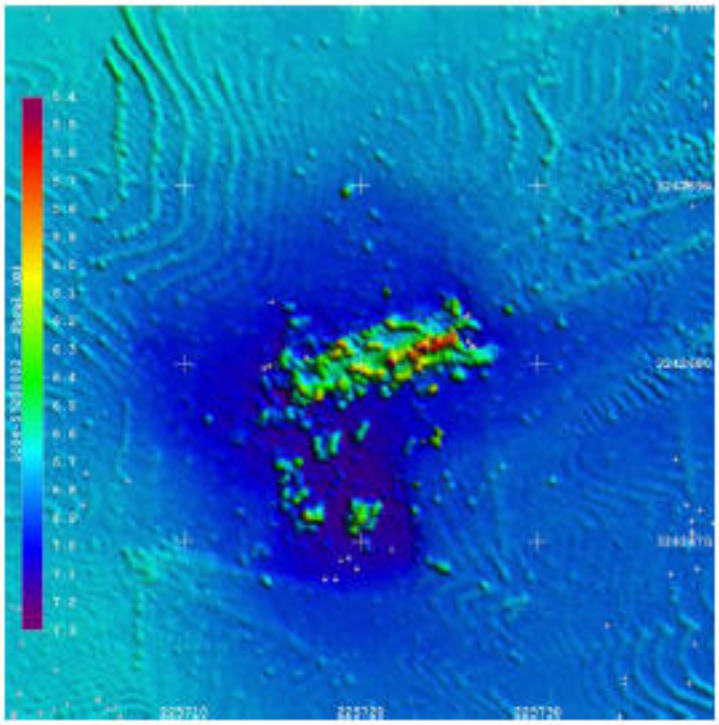


Figure 1.4.1

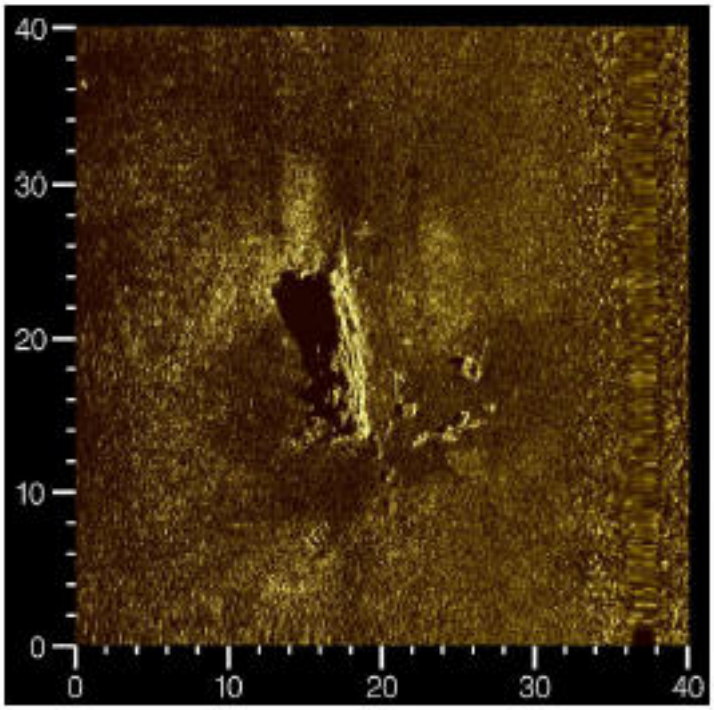


Figure 1.4.2

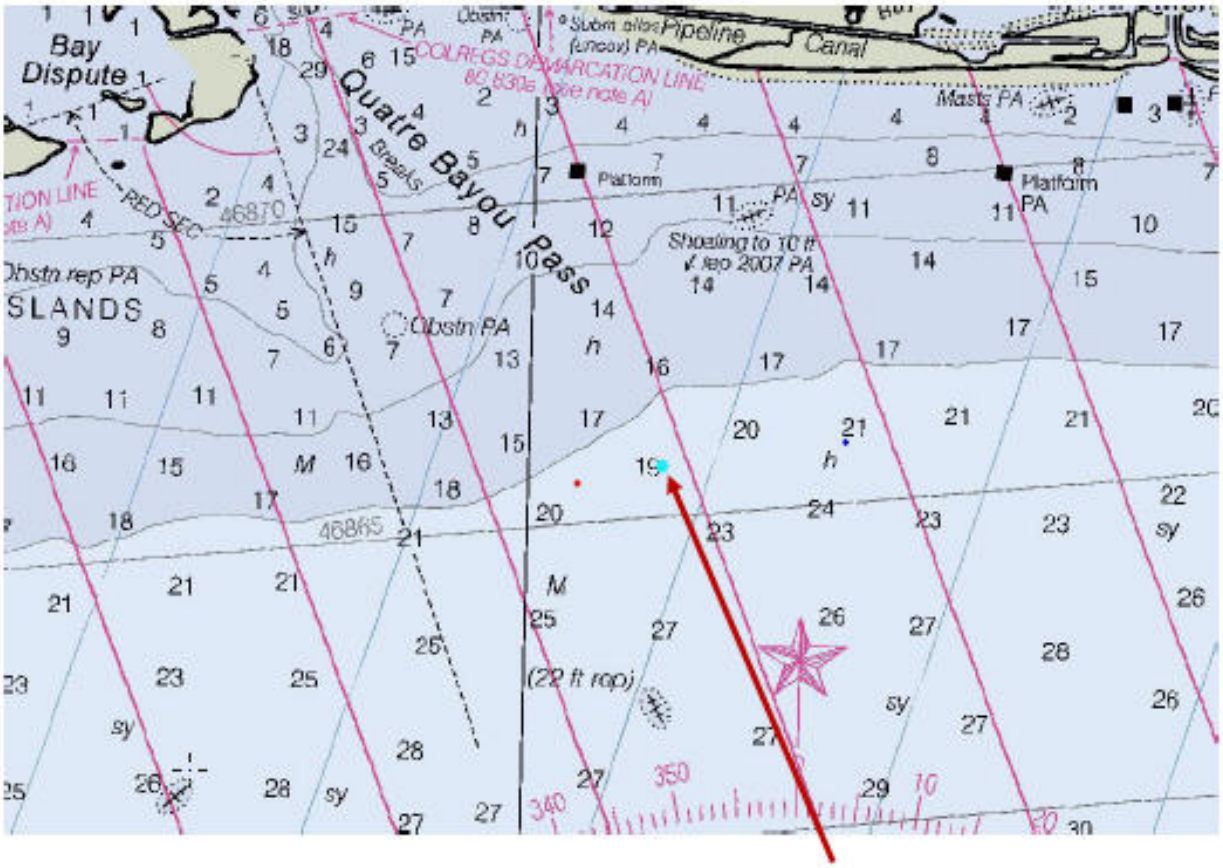

Bay
Dispute
Quatre Bayou Pass
Pipeline
Canal
COLREGS DEMARCATION LINE
Platform
Platform
PA
Masts PA
Shoaling to 10 ft
Obstn PA
Obstn rep PA
SLANDS
RED SEC
46870
46865
(22 ft rep)
Breaks

Figure 1.4.3

H11806 DtoN #7

Registry Number: H11806
State: Louisiana
Locality: Gulf of Mexico
Sub-locality: Vicinity of Quatre Bayou Pass
Project Number: OR-K977-FU-08
Survey Date: 12/07/2008

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11358	54th	02/01/2007	1:80,000 (11358_1)	USCG LNM: 04/21/2009 (06/02/2009) NGA NTM: 04/28/2007 (06/06/2009)
11364	42nd	09/01/2007	1:80,000 (11364_1)	[L]NTM: ?
11352	40th	05/01/2008	1:175,000 (11352_1)	[L]NTM: ?
11366	11th	01/01/2008	1:250,000 (11366_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: ?
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
1.5	9 ft Sounding	Shoal	2.74 m	29° 18' 23.7" N	089° 50' 55.5" W	---

1 - Danger To Navigation

1.5) 9 ft Sounding

DANGER TO NAVIGATION

Survey Summary

Survey Position: 29° 18' 23.7" N, 089° 50' 55.5" W

Least Depth: 2.74 m (= 9.00 ft = 1.500 fm = 1 fm 3.00 ft)

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

Timestamp: 2008-342.00:00:00.000 (12/07/2008)

GP Dataset: H11806 DtoN#7.xls

GP No.: 1

Charts Affected: 11358_1, 11364_1, 11352_1, 11366_1, 1116A_1, 11340_1, 11006_1, 411_1

Remarks:

A significant shoaling was found at this location. A depth of 9 ft was found in Quatre Bayou Pass where chart 11358 shows depths nearby of 24 feet to 29 feet. The shoaling was confirmed on multiple singlebeam echosounder lines.

Depths are reduced to Mean Lower Low Water using verified tides.

Positions are based on the NAD83 horizontal datum.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11806 DtoN#7.xls	1	0.00	000.0	Primary

Hydrographer Recommendations

Chart a 9 ft Sounding at surveyed location.

Cartographically-Rounded Depth (Affected Charts):

9ft (11358_1, 11364_1, 11352_1)

1 ½fm (1116A_1, 11340_1, 11006_1, 411_1)

1fm 3ft (11366_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

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

OBJNAM - 9 ft Sounding

QUASOU - 6:least depth known

SORDAT - 20081207

SORIND - US,US,survy,H11806

TECSOU - 1:found by echo-sounder

VERDAT - 12:Mean lower low water

Office Notes

Do not concur - Shoal 9 ft determined insignificant during office processing. Delete charted 9 ft depth.

Feature Images

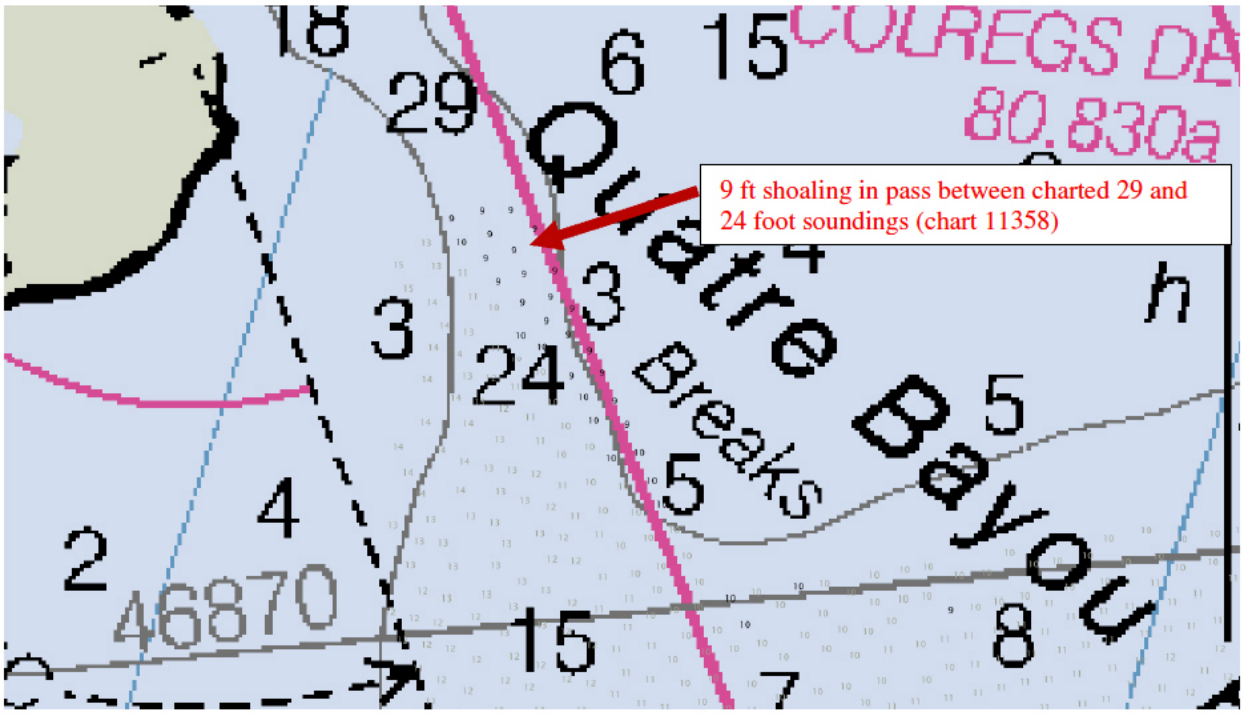


Figure 1.1.1

H11806 DToN#1

Registry Number: H11806
State: Louisiana
Locality: Plaquemines
Sub-locality: Vicinity of Quatre Bayou Pass
Project Number: OPR-K977-FU-08
Survey Date: 11/16/2008

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11365	20th	02/01/2008	1:50,000 (11365_1)	USCG LNM: 07/08/2008 (11/04/2008) NGA NTM: None (11/15/2008)
11358	54th	02/01/2007	1:80,000 (11358_1)	[L]NTM: ?
11364	42nd	09/01/2007	1:80,000 (11364_1)	[L]NTM: ?
11352	40th	05/01/2008	1:175,000 (11352_1)	[L]NTM: ?
11366	11th	01/01/2008	1:250,000 (11366_1)	[L]NTM: ?
11340	72nd	07/01/2007	1:458,596 (11340_1)	[L]NTM: ?
1116A	72nd	07/01/2007	1:458,596 (1116A_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
1.6	Obstruction	GP	-0.30 m	29° 16' 08.0" N	089° 53' 54.0" W	---

1 - Danger To Navigation

1.6) GP No. - 1 from H11806_DToN#1.xls

DANGER TO NAVIGATION

Survey Summary

Survey Position: 29° 16' 08.0" N, 089° 53' 54.0" W

Least Depth: -0.30 m (= -1.00 ft = -0.167 fm = 0 fm 5.00 ft)

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

Timestamp: 2008-321.00:00:00.000 (11/16/2008)

GP Dataset: H11806_DToN#1.xls

GP No.: 1

Charts Affected: 11365_1, 11358_1, 11364_1, 11352_1, 11366_1, 1116A_1, 11340_1, 11006_1, 411_1

Remarks:

An uncharted pipeline is exposed above the water surface with an approximated height of 1ft above MHW. Heights were determined visually and corrected to MHW. Positions are based on the NAD83 horizontal datum.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11806_DToN#1.xls	1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

-1ft (11365_1, 11358_1, 11364_1, 11352_1)

0fm (1116A_1, 11340_1, 11006_1, 411_1)

0fm 1ft (11366_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: INFORM - Exposed Pipeline Visually Identified

QUASOU - 9:value reported (not confirmed)

SORDAT - 20081116

SORIND - US,US,survy,H11806

VALSOU - -0.3048 m

VERDAT - 16:Mean high water

WATLEV - 2:always dry

Office Notes

Delete Obstn and notation (Exposed pipeline rep 1 ft above MHW).
Add Obstn and notation (Exposed pipeline).

Feature Images

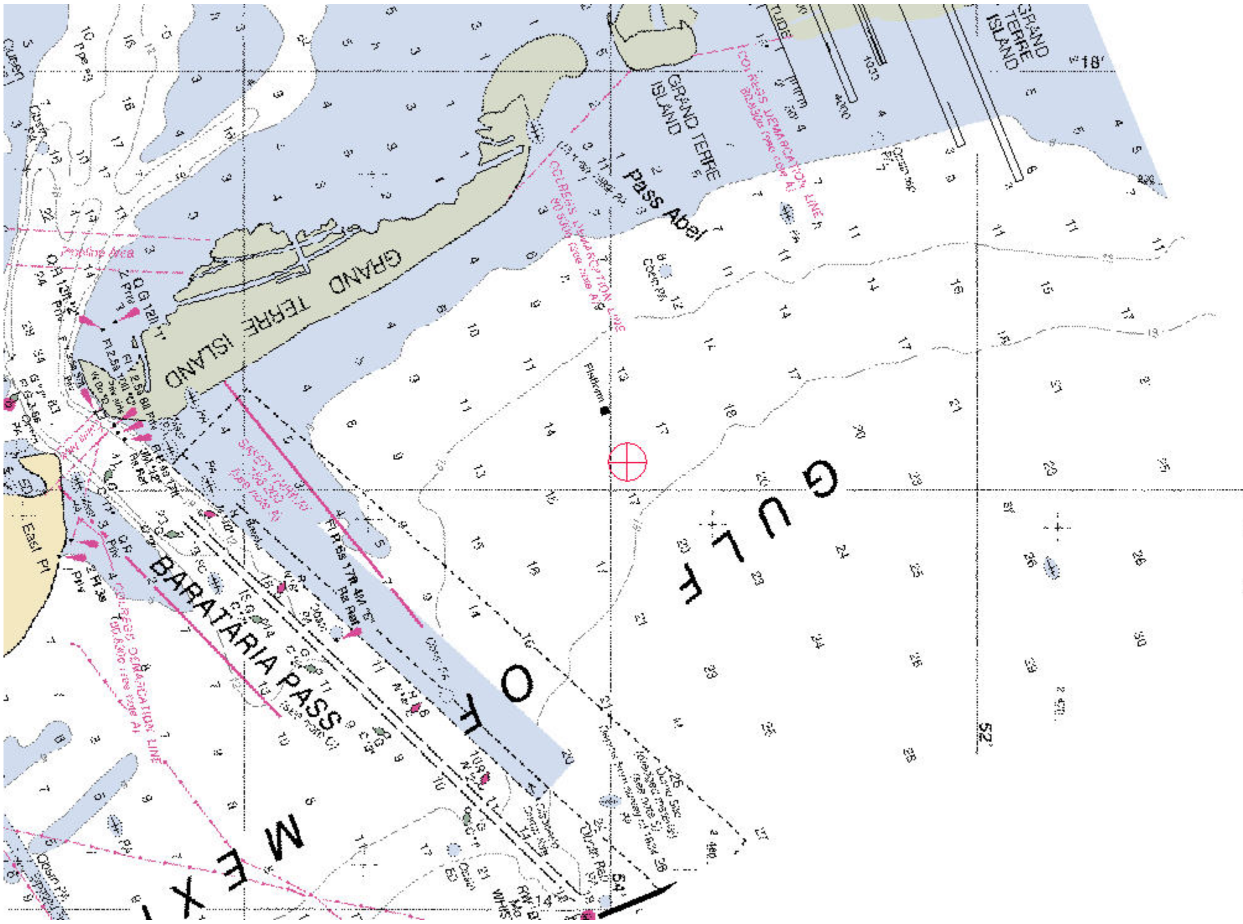


Figure 1.1.1

Figure 1.1.2

H11806 DtoN #5

Registry Number: H11806
State: Louisiana
Locality: Gulf of Mexico
Sub-locality: Vicinity of Quatre Bayou Pass
Project Number: OR-K977-FU-08
Survey Date: 01/09/2009

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11358	54th	02/01/2007	1:80,000 (11358_1)	USCG LNM: 12/09/2008 (12/30/2008) NGA NTM: 04/28/2007 (01/10/2009)
11352	40th	05/01/2008	1:175,000 (11352_1)	[L]NTM: ?
11366	11th	01/01/2008	1:250,000 (11366_1)	[L]NTM: ?
11340	72nd	07/01/2007	1:458,596 (11340_1)	[L]NTM: ?
1116A	72nd	07/01/2007	1:458,596 (1116A_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
1.7	22-ft Obstn (rep 2009)	Obstruction	6.70 m	29° 09' 36.9" N	089° 53' 18.8" W	---

1 - Danger To Navigation

1.7) GP No. - 1 from H11806_DtoN#5.xls

DANGER TO NAVIGATION

Survey Summary

Survey Position:	29° 09' 36.9" N, 089° 53' 18.8" W
Least Depth:	6.70 m (= 21.98 ft = 3.663 fm = 3 fm 3.98 ft)
TPU (±1.96σ:	**THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp:	2009-009.00:00:00.000 (01/09/2009)
GP Dataset:	H11806_DtoN#5.xls
GP No.:	1
Charts Affected:	11358_1, 11352_1, 11366_1, 1116A_1, 11340_1, 11006_1, 411_1

Remarks:

Depths are reduced to Mean Lower Low Water using observed tides.

Positions are based on the NAD83 horizontal datum.

A significant obstruction was found at this location. The object appears to be debris. The object had an estimated height of 31.53ft, a length of 20.54, a width of 1.61ft, and an estimated clearance depth of 21.98ft, based on sidescan sonar data. Chart 11358 does not indicate an obstruction at this location. (FPI Contact Reference 2C01-03600001-M) The sidescan sonar image (speed corrected waterfall display) shows a 130X130ft area approximately centered at the location. The obstruction is the bright object with a shadow to the right. An excerpt from Chart 11358 is shown below, with a red arrow indicating the location of the obstruction (small cyan circle).

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11806_DtoN#5.xls	1	0.00	000.0	Primary

Hydrographer Recommendations

Recommend charting 22-ft obstruction. Include chart notation "(rep 2009)".

Cartographically-Rounded Depth (Affected Charts):

22ft (11358_1, 11352_1)

3 ½fm (1116A_1, 11340_1, 11006_1, 411_1)

3fm 4ft (11366_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:
QUASOU - 9:value reported (not confirmed)
SORDAT - 20090109
SORIND - US,US,survy,H11806
TECSOU - 2:found by side scan sonar
VALSOU - 6.699 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Do not concur - Least depth was determined to be 35 feeet during office processing. Delete 22 Obstn (rep 2009) and danger curve. Add 35 Obstn and danger curve.

Feature Images

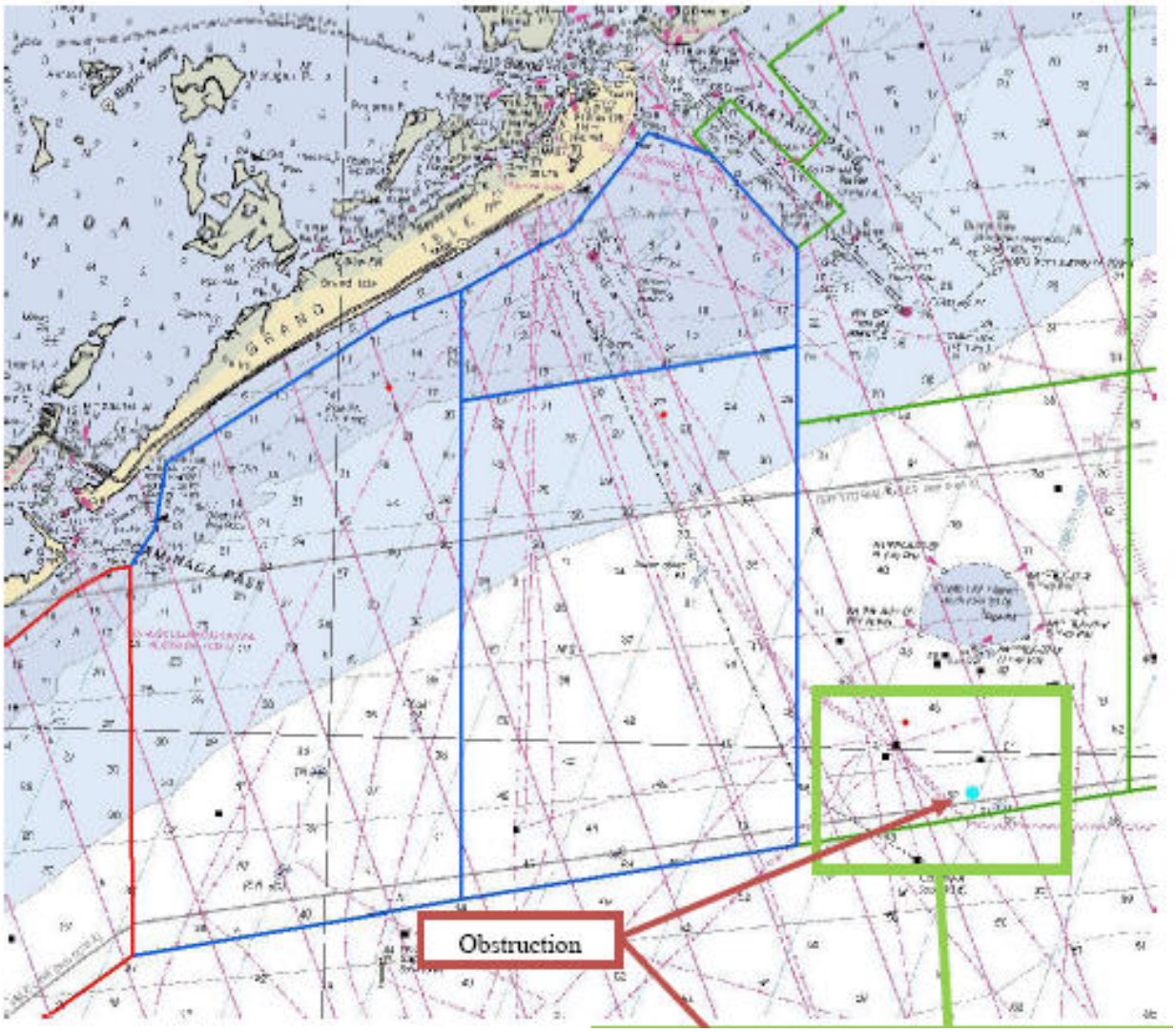


Figure 1.1.1

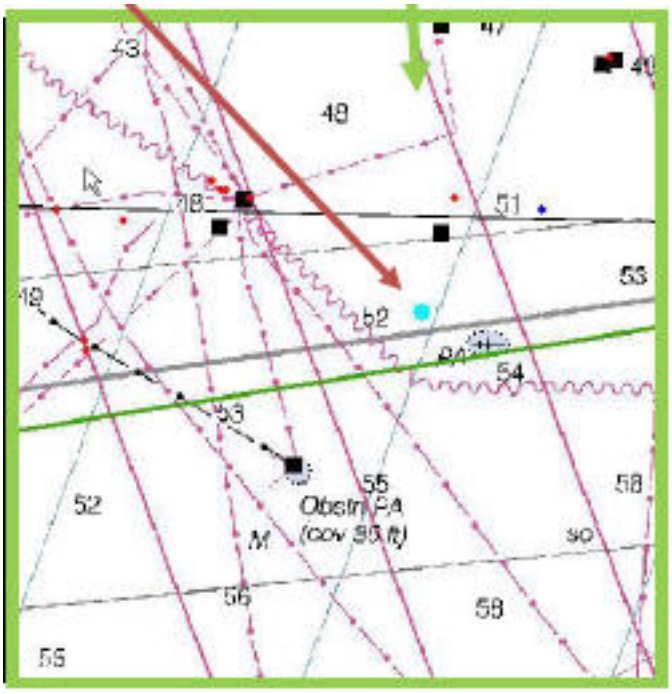


Figure 1.1.2

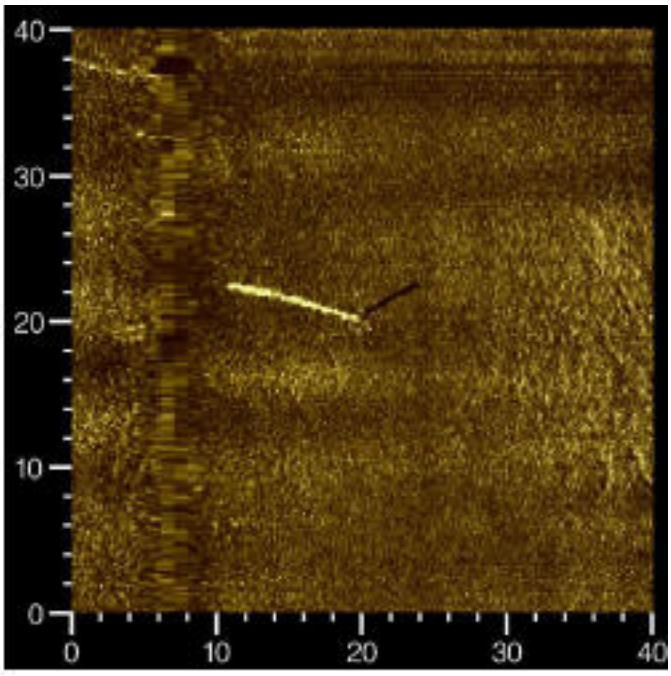


Figure 1.1.3

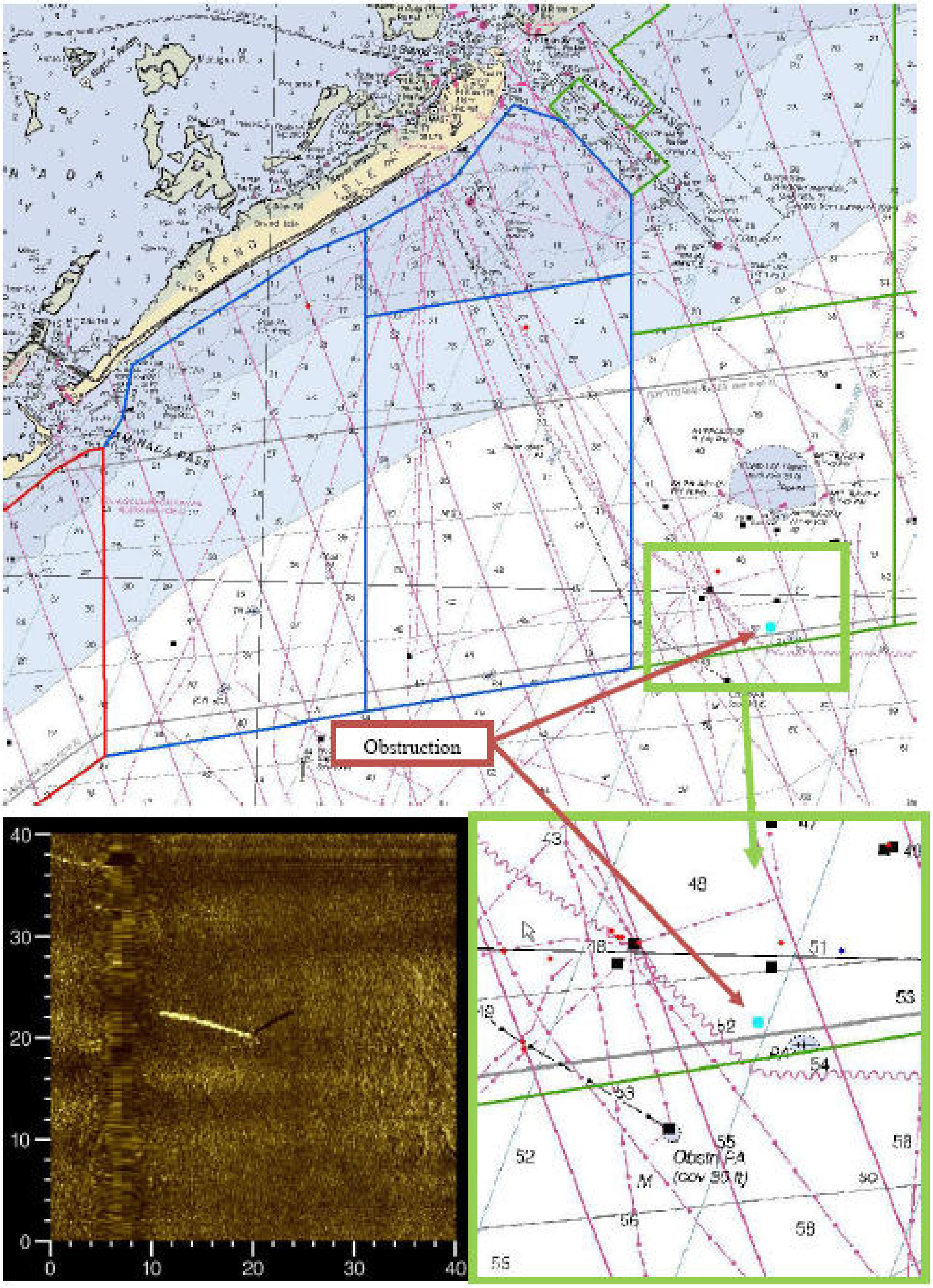


Figure 1.1.4

H11806 DtoN#6

Registry Number: H11806
State: Louisiana
Locality: Gulf of Mexico
Sub-locality: Vicinity of Quatre Bayou Pass
Project Number: OR-K977-FU-08
Survey Date: 01/13/2009

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11358	54th	02/01/2007	1:80,000 (11358_1)	USCG LNM: 01/06/2009 (01/06/2009) NGA NTM: 04/28/2007 (01/17/2009)
11352	40th	05/01/2008	1:175,000 (11352_1)	[L]NTM: ?
11366	11th	01/01/2008	1:250,000 (11366_1)	[L]NTM: ?
11340	72nd	07/01/2007	1:458,596 (11340_1)	[L]NTM: ?
1116A	72nd	07/01/2007	1:458,596 (1116A_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
1.8	OBSTR (exposed pipe) H11806 DtoN#6	Obstruction	0.00 m	29° 09' 23.9" N	089° 53' 54.7" W	---

1 - Danger To Navigation

1.8) OBSTR (exposed pipe) H11806 DtoN#6

DANGER TO NAVIGATION

Survey Summary

Survey Position: 29° 09' 23.9" N, 089° 53' 54.7" W

Least Depth: 0.00 m (= 0.00 ft = 0.000 fm = 0 fm 0.00 ft)

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

Timestamp: 2009-013.00:00:00.000 (01/13/2009)

GP Dataset: H11806_DtoN#6.xls

GP No.: 1

Charts Affected: 11358_1, 11352_1, 11366_1, 1116A_1, 11340_1, 11006_1, 411_1

Remarks:

Depths are reduced to Mean Lower Low Water using observed tides. Positions are based on the NAD83 horizontal datum. A significant obstruction was found at this location. The object is a pipeline that is exposed above the water surface. No photo was taken at time of acquisition but the survey crew observed the exposed pipe (w/ valve) and sidescan records show the feature extending from the seafloor to the surface. Charts 11358 and 11340 do not indicate an obstruction at this location. (FPI Contact Reference 2C01-01200003-M).

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11806_DtoN#6.xls	1	0.00	000.0	Primary

Hydrographer Recommendations

Chart Obstruction (exposed pipe Rep 2009)

Cartographically-Rounded Depth (Affected Charts):

0ft (11358_1, 11352_1)

0fm (1116A_1, 11340_1, 11006_1, 411_1)

0fm 0ft (11366_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: CATOBS - 2:wellhead

QUASOU - 9:value reported (not confirmed)

SORDAT - 20090113

SORIND - US,US,survey,H11806

TECSOU - 2:found by side scan sonar

VALSOU - 0.0 m

VERDAT - 12:Mean lower low water

WATLEV - 2:always dry

Office Notes

Do not concur - See Descriptive Report for final charting recommendation.

Feature Images

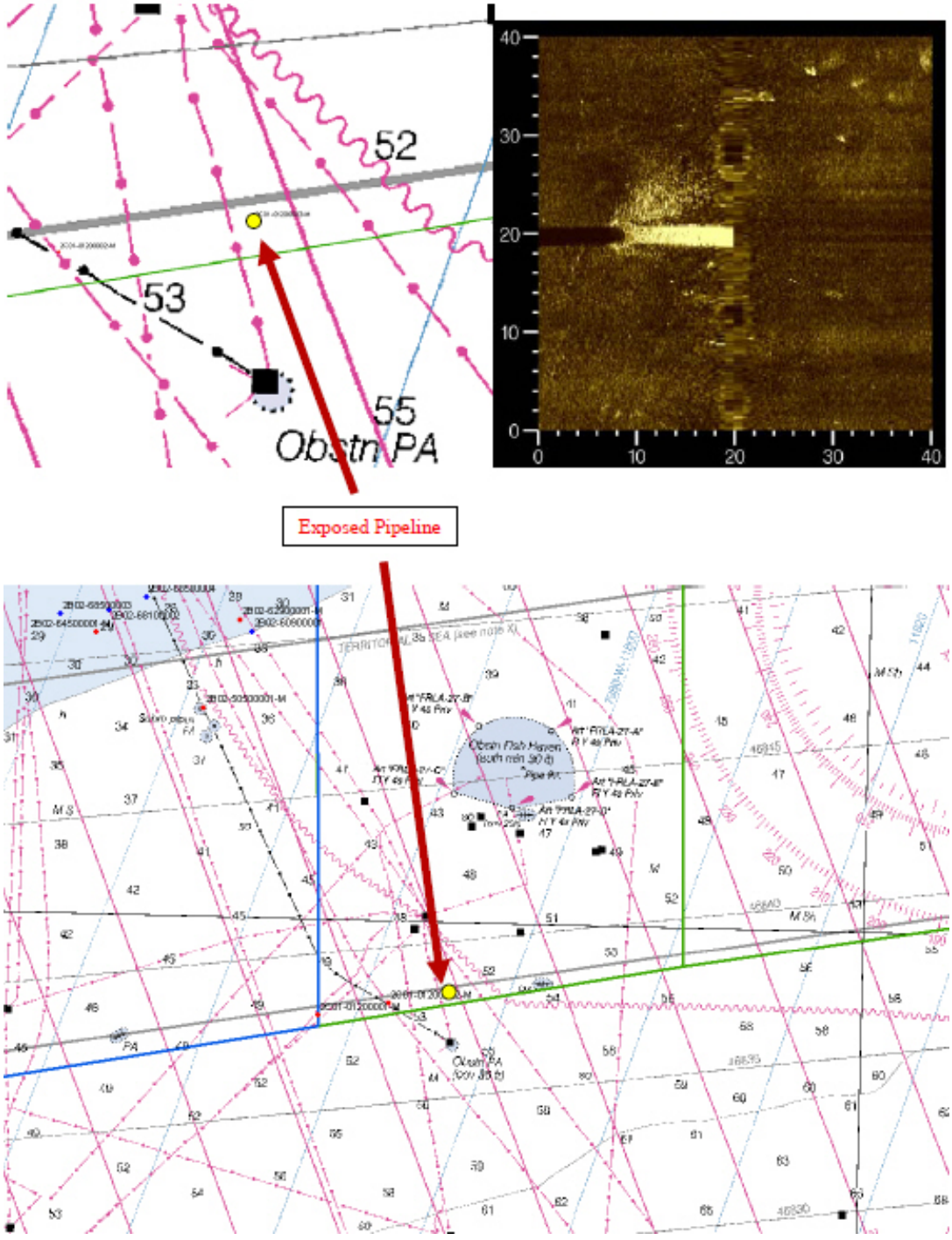


Figure 1.1.1

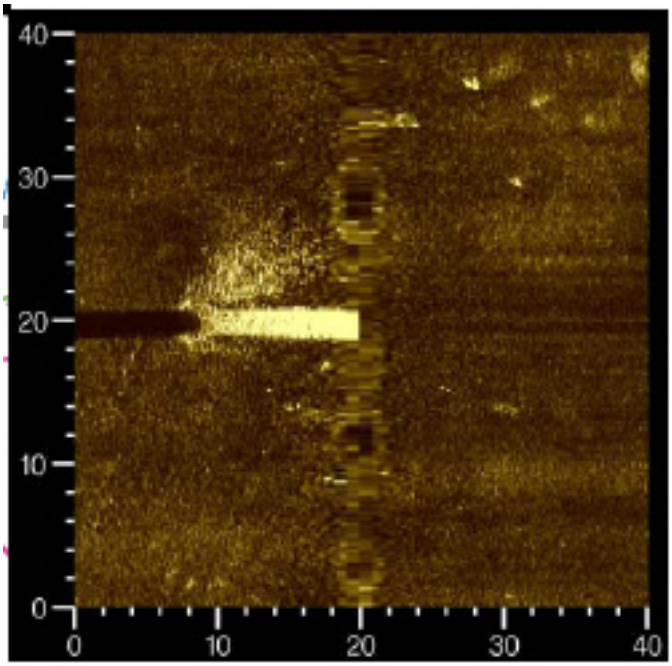


Figure 1.1.2

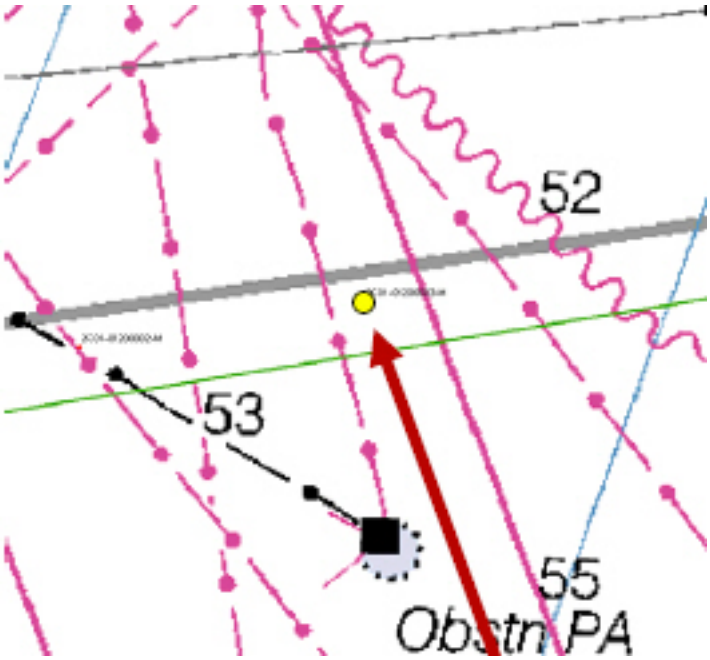


Figure 1.1.3

Registry Number: H11806

State: Louisiana

Locality: Gulf of Mexico

Sub-locality: Vicinity of Quatre Bayou Pass

Project Number: OPR-K977-FU-08

Survey Date: 01/01/1990

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11358	54th	02/01/2007	1:80,000 (11358_1)	USCG LNM: 11/04/2008 (11/04/2008) NGA NTM: 04/28/2007 (11/15/2008)
11352	40th	05/01/2008	1:175,000 (11352_1)	[L]NTM: ?
11366	11th	01/01/2008	1:250,000 (11366_1)	[L]NTM: ?
11340	72nd	07/01/2007	1:458,596 (11340_1)	[L]NTM: ?
1116A	72nd	07/01/2007	1:458,596 (1116A_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
1.9	28-ft Obstruction DtoN #4.2	GP	8.69 m	29° 12' 19.7" N	089° 53' 33.9" W	---

1 - Danger To Navigation

1.9) 28-ft Obstruction DtoN #4.2

DANGER TO NAVIGATION

Survey Summary

Survey Position: 29° 12' 19.7" N, 089° 53' 33.9" W

Least Depth: 8.69 m (= 28.50 ft = 4.750 fm = 4 fm 4.50 ft)

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

Timestamp: 1990-001.11:60:00.000 (01/01/1990)

GP Dataset: H11806 DtoN Fugro 241108_1-2PSS.txt

GP No.: 2

Charts Affected: 11358_1, 11352_1, 11366_1, 1116A_1, 11340_1, 11006_1, 411_1

Remarks:

A significant obstruction was found at this location. The object had an estimated height of 3.5ft, a length of 17.5ft, a width of 2.5ft, and an estimated clearance depth of 32.8ft, based on sidescan sonar data. Multibeam sonar data show the obstruction to be 10.2ft high with a clearance depth of 28.5ft.

Chart 11358 does not indicate an obstruction at this location. (FPI Contact Reference 2C01-54000003-M) The image shows a 130X130ft area centered at the location. The obstruction is the bright feature with a dark shadow to the right.

The SS image is taken from a speed corrected Side Scan sonar image. The sidescan sonar image shows a 130X130ft area approximately centered at the location. The obstruction is the bright feature with a dark shadow to the right.

The multibeam bathymetry image shows the bathymetry over a 130X130ft area with the depth scale in meters. An excerpt from Chart 11358 is shown below, with a red arrow indicating the location of the obstruction (small cyan circle).

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11806 DtoN Fugro 241108_1-2PSS.txt	2	0.00	000.0	Primary

Hydrographer Recommendations

Chart 28-ft Obstruction.

Cartographically-Rounded Depth (Affected Charts):

28ft (11358_1, 11352_1)

4 ¾fm (1116A_1, 11340_1, 11006_1, 411_1)

4fm 4ft (11366_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes:

OBJNAM - 28-ft OBSTR

QUASOU - 6:least depth known

SORDAT - 20080820

SORIND - US,US,Survy,H11806

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

VALSOU - 8.687 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Least depth revised during office processing to 32 ft. Delete charted 28 Obstn (rep 1990) and danger curve. Add 32 Obstn and danger curve.

Feature Images

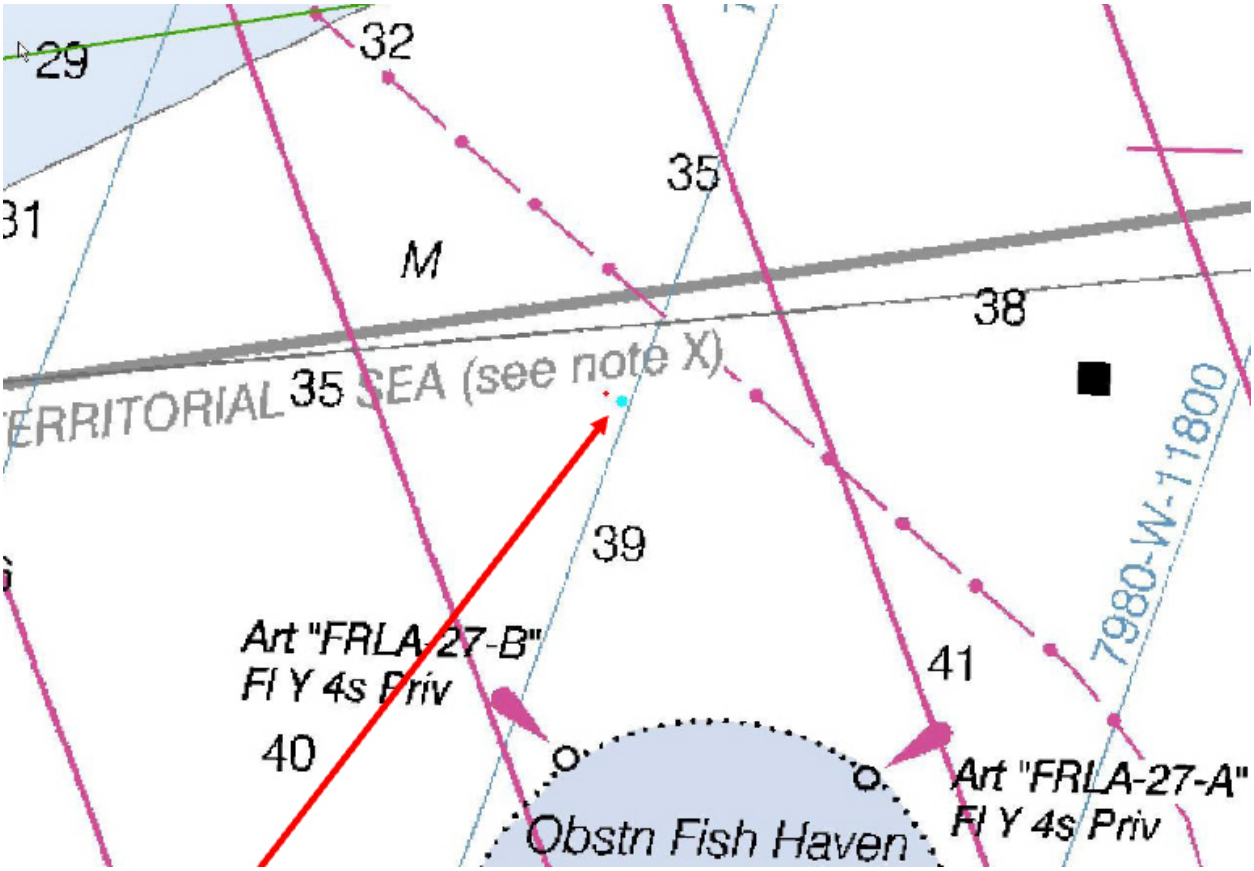


Figure 1.1.1

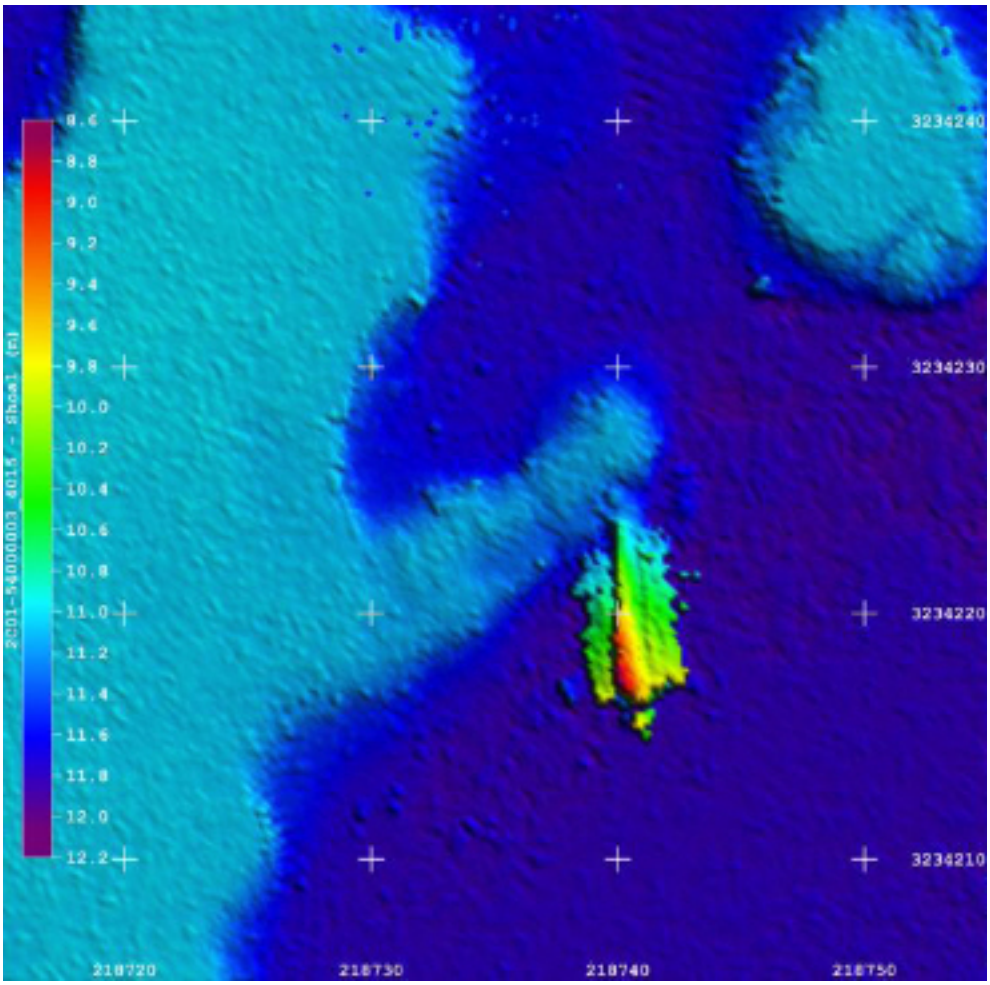

8.6
8.8
9.0
9.2
9.4
9.6
9.8
10.0
10.2
10.4
10.6
10.8
11.0
11.2
11.4
11.6
11.8
12.0
12.2
3234240
3234230
3234220
3234210
218720
218730
218740
218750

Figure 1.1.2

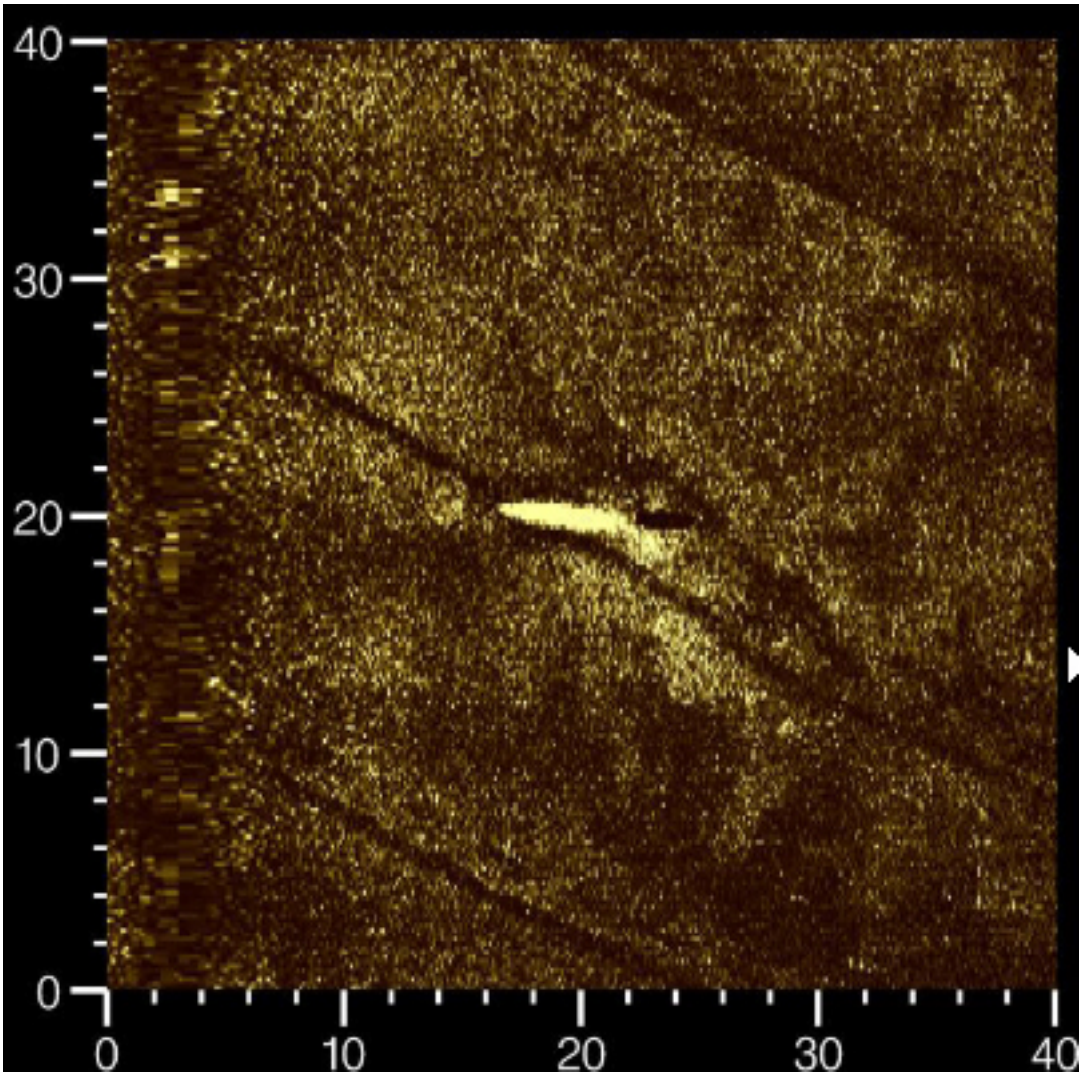


Figure 1.1.3

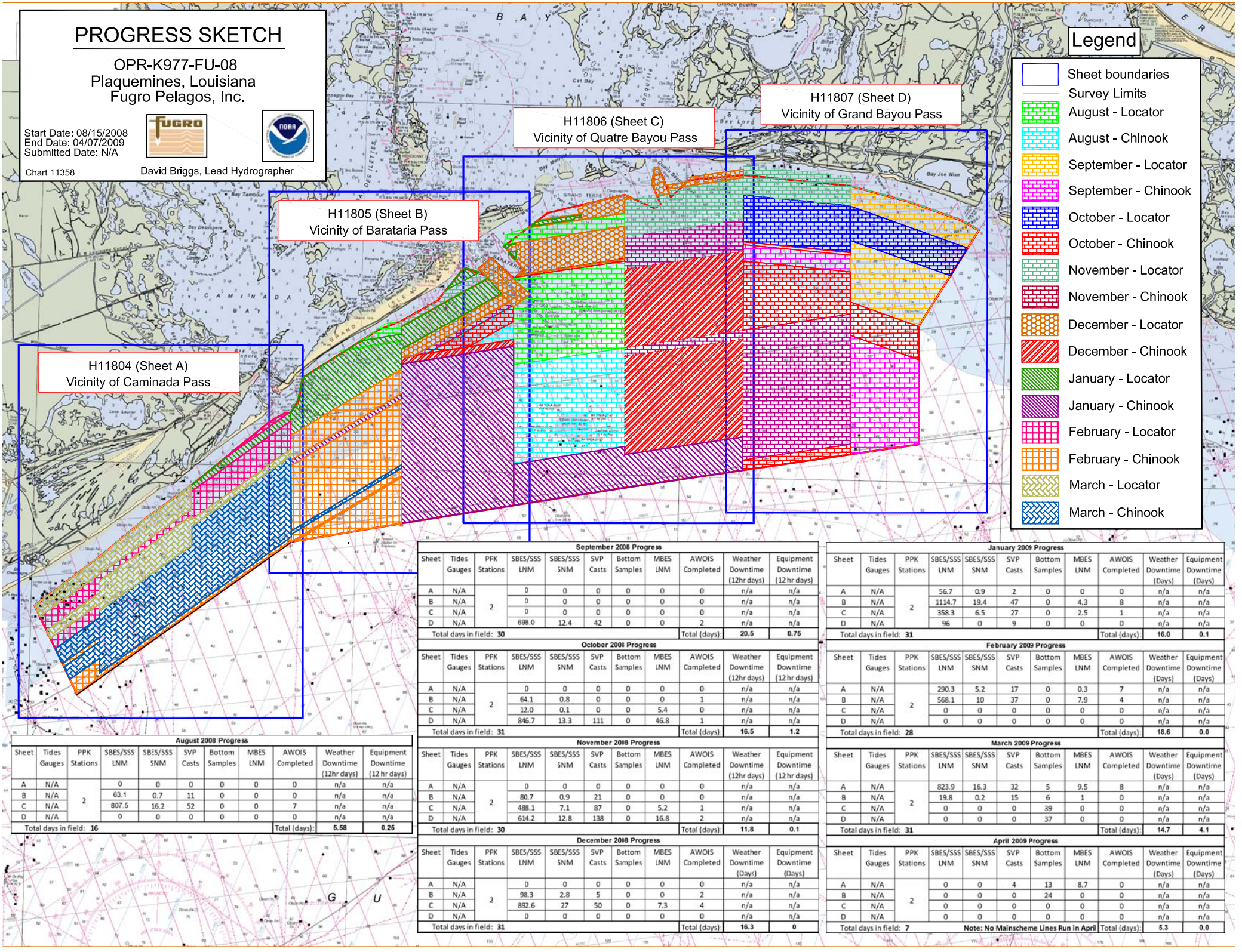
PROGRESS SKETCH

OPR-K977-FU-08
Plaquemines, Louisiana
Fugro Pelagos, Inc.

Start Date: 08/15/2008
End Date: 04/07/2009
Submitted Date: N/A

Chart 11358

David Briggs, Lead Hydrographer



August 2008 Progress

Sheet	Tides Gauges	PPK Stations	SBES/SSS LNM	SBES/SSS SNM	SVP Casts	Bottom Samples	MBES LNM	AWOIS Completed	Weather Downtime (12hr days)	Equipment Downtime (12 hr days)
A	N/A	2	0	0	0	0	0	0	n/a	n/a
B	N/A		63.1	0.7	11	0	0	0	n/a	n/a
C	N/A		807.5	16.2	52	0	0	7	n/a	n/a
D	N/A		0	0	0	0	0	0	n/a	n/a
Total days in field: 16								Total (days):	5.58	0.25

September 2008 Progress

Sheet	Tides Gauges	PPK Stations	SBES/SSS LNM	SBES/SSS SNM	SVP Casts	Bottom Samples	MBES LNM	AWOIS Completed	Weather Downtime (12hr days)	Equipment Downtime (12 hr days)
A	N/A	2	0	0	0	0	0	0	n/a	n/a
B	N/A		0	0	0	0	0	0	n/a	n/a
C	N/A		0	0	0	0	0	0	n/a	n/a
D	N/A		698.0	12.4	42	0	0	2	n/a	n/a
Total days in field: 30								Total (days):	20.5	0.75

October 2008 Progress

Sheet	Tides Gauges	PPK Stations	SBES/SSS LNM	SBES/SSS SNM	SVP Casts	Bottom Samples	MBES LNM	AWOIS Completed	Weather Downtime (12hr days)	Equipment Downtime (12 hr days)
A	N/A	2	0	0	0	0	0	0	n/a	n/a
B	N/A		64.1	0.8	0	0	0	1	n/a	n/a
C	N/A		12.0	0.1	0	0	5.4	0	n/a	n/a
D	N/A		846.7	13.3	111	0	46.8	1	n/a	n/a
Total days in field: 31								Total (days):	16.5	1.2

November 2008 Progress

Sheet	Tides Gauges	PPK Stations	SBES/SSS LNM	SBES/SSS SNM	SVP Casts	Bottom Samples	MBES LNM	AWOIS Completed	Weather Downtime (12hr days)	Equipment Downtime (12 hr days)
A	N/A	2	0	0	0	0	0	0	n/a	n/a
B	N/A		80.7	0.9	21	0	0	0	n/a	n/a
C	N/A		488.1	7.1	87	0	5.2	1	n/a	n/a
D	N/A		614.2	12.8	138	0	16.8	2	n/a	n/a
Total days in field: 30								Total (days):	11.8	0.1

December 2008 Progress

Sheet	Tides Gauges	PPK Stations	SBES/SSS LNM	SBES/SSS SNM	SVP Casts	Bottom Samples	MBES LNM	AWOIS Completed	Weather Downtime (Days)	Equipment Downtime (Days)
A	N/A	2	0	0	0	0	0	0	n/a	n/a
B	N/A		98.3	2.8	5	0	0	2	n/a	n/a
C	N/A		892.6	27	50	0	7.3	4	n/a	n/a
D	N/A		0	0	0	0	0	0	n/a	n/a
Total days in field: 31								Total (days):	16.3	0

January 2009 Progress

Sheet	Tides Gauges	PPK Stations	SBES/SSS LNM	SBES/SSS SNM	SVP Casts	Bottom Samples	MBES LNM	AWOIS Completed	Weather Downtime (Days)	Equipment Downtime (Days)
A	N/A	2	56.7	0.9	2	0	0	0	n/a	n/a
B	N/A		1114.7	19.4	47	0	4.3	8	n/a	n/a
C	N/A		358.3	6.5	27	0	2.5	1	n/a	n/a
D	N/A		96	0	9	0	0	0	n/a	n/a
Total days in field: 31								Total (days):	16.0	0.1

February 2009 Progress

Sheet	Tides Gauges	PPK Stations	SBES/SSS LNM	SBES/SSS SNM	SVP Casts	Bottom Samples	MBES LNM	AWOIS Completed	Weather Downtime (Days)	Equipment Downtime (Days)
A	N/A	2	290.3	5.2	17	0	0.3	7	n/a	n/a
B	N/A		568.1	10	37	0	7.9	4	n/a	n/a
C	N/A		0	0	0	0	0	0	n/a	n/a
D	N/A		0	0	0	0	0	0	n/a	n/a
Total days in field: 28								Total (days):	18.6	0.0

March 2009 Progress

Sheet	Tides Gauges	PPK Stations	SBES/SSS LNM	SBES/SSS SNM	SVP Casts	Bottom Samples	MBES LNM	AWOIS Completed	Weather Downtime (Days)	Equipment Downtime (Days)
A	N/A	2	823.9	16.3	32	5	9.5	8	n/a	n/a
B	N/A		19.8	0.2	15	6	1	0	n/a	n/a
C	N/A		0	0	0	39	0	0	n/a	n/a
D	N/A		0	0	0	37	0	0	n/a	n/a
Total days in field: 31								Total (days):	14.7	4.1

April 2009 Progress

Sheet	Tides Gauges	PPK Stations	SBES/SSS LNM	SBES/SSS SNM	SVP Casts	Bottom Samples	MBES LNM	AWOIS Completed	Weather Downtime (Days)	Equipment Downtime (Days)
A	N/A	2	0	0	4	13	8.7	0	n/a	n/a
B	N/A		0	0	0	24	0	0	n/a	n/a
C	N/A		0	0	0	0	0	0	n/a	n/a
D	N/A		0	0	0	0	0	0	n/a	n/a
Total days in field: 7					Note: No Mainscheme Lines Run in April			Total (days):	5.3	0.0

Appendix IV - Tides and Water Levels

Abstract of Times of Hydrography for Smooth Tides
Project Number: OPR-K977-FU-08 Registry Number: H11806
Contractor Name: Fugro Pelagos Inc. Date: June 19, 2009
Sheet Letter: C
Inclusive Dates: August 16, 2008 and ended on April 3, 2009
Fieldwork is complete and verified tides were applied for the production of the final soundings, BASE surface, and S-57 feature file.

Abstract of Times of Hydrography for R/V Chinook (SBES)

YEAR	DAY	START TIME (UTC)	END TIME (UTC)	COMMENTS
2008	229	13:39:14	14:45:55	
2008	230	14:04:47	17:19:48	
2008	231	12:05:26	21:53:25	
2008	232	12:31:50	21:19:30	
2008	233	11:45:13	21:26:10	
2008	234	12:27:31	22:04:55	
2008	235	11:57:36	18:51:20	
2008	239	12:06:27	22:15:59	
2008	240	11:47:17	20:00:38	
2008	241	11:52:45	21:50:22	
2008	281	13:26:52	16:19:15	
2008	308	19:00:25	22:12:28	
2008	313	12:58:53	22:09:46	
2008	318	13:15:07	21:45:23	
2008	321	15:37:16	22:28:01	
2008	323	13:11:38	14:52:10	
2008	330	19:15:03	22:20:24	
2008	332	13:18:08	13:55:21	
2008	332	21:44:00	22:18:01	
2008	333	15:41:07	20:27:07	
2008	334	13:13:14	13:28:57	
2008	337	12:33:27	22:58:00	
2008	341	12:36:15	21:50:04	
2008	342	12:45:55	22:45:44	
2008	347	13:24:57	16:28:53	
2008	347	17:44:30	22:57:33	
2008	348	1:06:56	8:30:12	

2008	350	22:53:24	23:59:59	
2008	351	0:00:00	3:57:43	
2008	351	13:19:40	22:26:07	
2008	352	1:28:21	10:57:01	
2008	352	13:19:30	23:34:21	
2008	353	1:02:01	10:36:40	
2008	353	13:21:07	22:28:16	
2008	354	0:25:34	5:18:21	
2008	354	12:50:14	21:56:55	
2008	355	0:23:23	9:44:59	
2008	355	13:10:36	22:13:44	
2008	356	0:37:57	4:42:39	
2008	364	14:01:30	14:16:59	
2008	364	19:45:34	22:51:51	
2008	365	12:43:51	22:30:28	
2008	366	12:55:08	15:51:22	
2009	2	12:44:23	22:45:30	
2009	3	12:57:07	20:10:26	
2009	4	0:23:06	6:45:22	
2009	4	18:46:21	22:29:37	
2009	5	1:00:49	10:25:38	
2009	5	13:29:21	22:42:33	
2009	6	1:11:35	2:31:46	
2009	7	18:23:51	21:58:04	
2009	8	12:48:43	1:53:14	
2009	9	12:34:40	19:21:08	
2009	13	13:49:26	18:18:02	
2009	28	0:54:17	4:56:36	
2009	29	23:00:33	1:06:05	
2009	30	22:51:40	1:26:02	
2009	32	0:35:19	5:55:57	
2009	45	0:18:40	0:23:23	
2009	46	0:29:59	2:26:46	
2009	89	0:31:21	0:41:09	
2009	93	23:15:50	23:56:52	

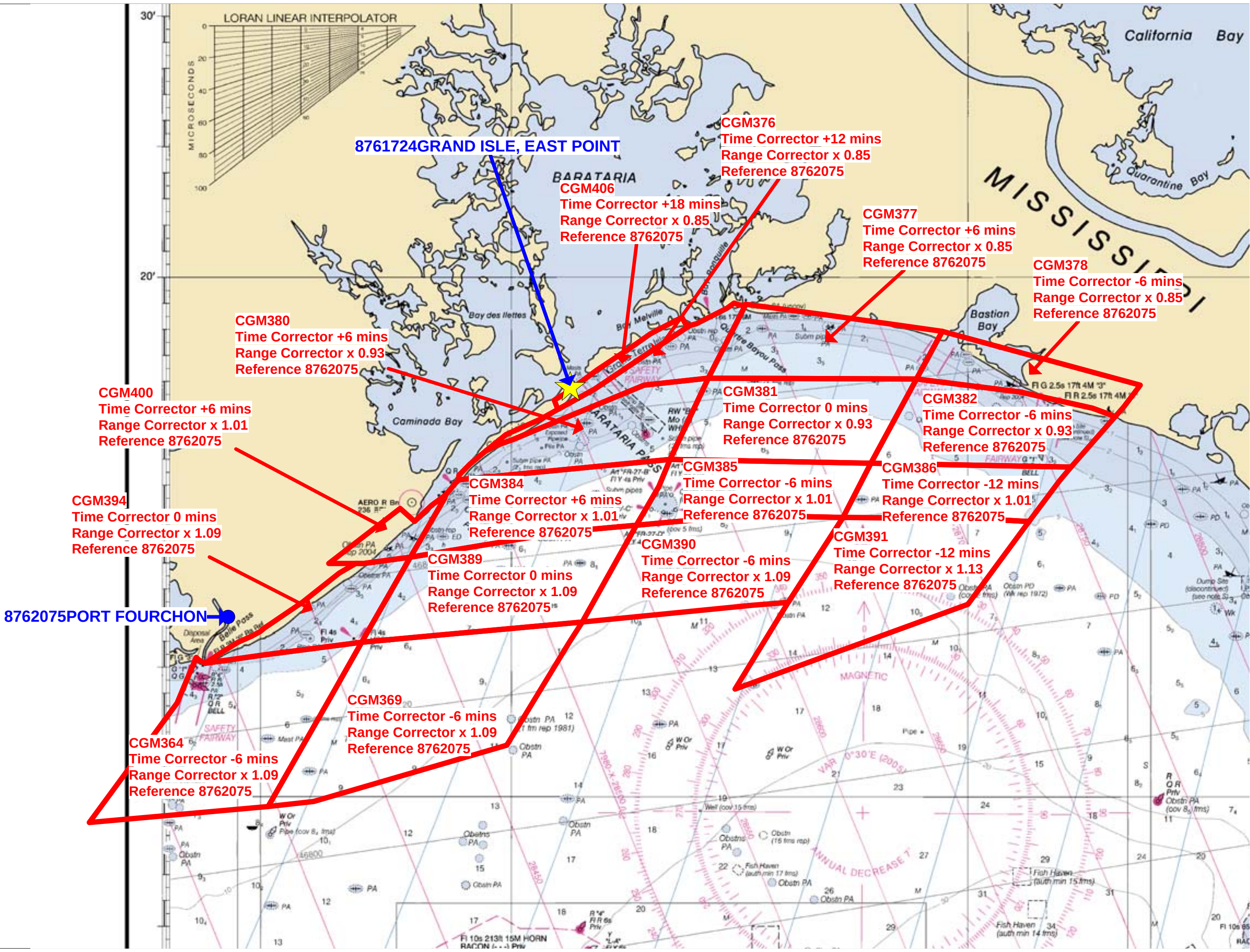
Abstract of Times of Hydrography for R/V Locator (SBES)

YEAR	DAY	START TIME (UTC)	END TIME (UTC)	COMMENTS
2008	229	21:11:24	21:46:34	
2008	230	11:53:12	12:23:09	
2008	230	13:58:53	21:05:09	
2008	231	12:44:45	21:23:06	
2008	232	12:55:51	16:24:31	
2008	232	17:56:48	21:19:28	
2008	233	12:23:31	21:49:00	
2008	234	12:02:21	22:09:12	
2008	235	11:44:40	18:47:33	
2008	236	12:00:01	15:58:24	
2008	239	11:44:37	21:48:15	
2008	240	11:57:18	20:27:21	
2008	241	11:54:12	20:52:13	
2008	306	20:20:59	21:38:00	
2008	314	12:46:10	22:12:07	
2008	318	12:57:46	21:50:07	
2008	319	13:25:10	20:55:57	
2008	322	12:53:04	21:22:12	
2008	324	13:00:10	21:55:01	
2008	331	12:41:06	22:09:35	
2008	332	12:43:51	22:11:32	
2008	333	12:58:00	14:16:12	
2008	333	15:39:15	21:09:33	
2008	337	16:49:37	22:02:16	
2008	341	18:22:06	22:08:15	
2008	342	13:23:45	22:15:35	
2008	347	13:47:43	22:38:03	
2008	351	13:32:47	22:01:27	
2008	352	13:15:12	22:27:24	
2008	353	12:56:32	22:46:24	
2008	354	13:43:27	22:50:17	
2008	355	13:06:22	20:15:16	
2009	9	18:21:36	20:30:20	
2009	14	13:44:26	18:25:55	
2009	14	20:28:52	23:09:00	
2009	15	13:34:32	20:36:38	

2009	24	16:02:54	21:38:27	
2009	25	18:59:33	19:39:01	
2009	26	12:57:44	15:35:24	
2009	27	12:51:26	16:20:43	
2009	30	18:51:57	20:53:02	
2009	31	19:43:33	21:55:39	
2009	32	12:58:21	19:52:11	
2009	34	13:17:29	15:38:05	
2009	34	21:19:07	21:59:49	
2009	36	12:51:31	13:43:33	
2009	89	13:01:29	13:13:52	
2009	89	14:17:27	15:31:21	

Abstract of Times of Hydrography for R/V Locator (MBES)

YEAR	DAY	START TIME (UTC)	END TIME (UTC)	COMMENTS
2008	290	19:46:47	21:12:30	
2008	294	13:08:15	16:09:49	
2008	329	14:07:56	18:13:47	
2008	337	14:27:44	15:49:44	
2008	341	14:23:47	16:48:39	
2008	365	15:40:04	19:32:07	
2009	22	13:42:31	15:13:54	



LORAN LINEAR INTERPOLATOR
MICROSECONDS
BARATARIA
California Bay
Quarantine Bay
MISSISSIPPI
Bay des Ilettes
Caminada Bay
Bastion Bay
8761724GRAND ISLE, EAST POINT
8762075PORT FOURCHON
CGM376
Time Corrector +12 mins
Range Corrector x 0.85
Reference 8762075
CGM406
Time Corrector +18 mins
Range Corrector x 0.85
Reference 8762075
CGM377
Time Corrector +6 mins
Range Corrector x 0.85
Reference 8762075
CGM378
Time Corrector -6 mins
Range Corrector x 0.85
Reference 8762075
CGM380
Time Corrector +6 mins
Range Corrector x 0.93
Reference 8762075
CGM400
Time Corrector +6 mins
Range Corrector x 1.01
Reference 8762075
CGM381
Time Corrector 0 mins
Range Corrector x 0.93
Reference 8762075
CGM382
Time Corrector -6 mins
Range Corrector x 0.93
Reference 8762075
CGM394
Time Corrector 0 mins
Range Corrector x 1.09
Reference 8762075
CGM384
Time Corrector +6 mins
Range Corrector x 1.01
Reference 8762075
CGM385
Time Corrector -6 mins
Range Corrector x 1.01
Reference 8762075
CGM386
Time Corrector -12 mins
Range Corrector x 1.01
Reference 8762075
CGM389
Time Corrector 0 mins
Range Corrector x 1.09
Reference 8762075
CGM390
Time Corrector -6 mins
Range Corrector x 1.09
Reference 8762075
CGM391
Time Corrector -12 mins
Range Corrector x 1.13
Reference 8762075
CGM369
Time Corrector -6 mins
Range Corrector x 1.09
Reference 8762075
CGM364
Time Corrector -6 mins
Range Corrector x 1.09
Reference 8762075

H11806 Bottom Sample Summary

Field				S-57 Attribute Assignments		
ID#	Description	Latitude	Longitude	Colour	NATQUA	NATSUR
1	2-SHT_C_BS01 - brown sand and small shells - 2 pics	N29 17.3447	W089 53.0507	8	3	4,17
2	2-SHT_C_BS02 brown mud and some shells 2 pics	N29 17.3473	W089 51.8378	8	6	1,17
3	2-SHT_C_BS03 - dark greyish/brown mud some shells - 2 pics IMG-4856	N29 17.4040	W089 50.5788	7,8	6	1,17
4	2-SHT_C_BS04 mud-shells - dark brown/grey 3pics IMG-4854	N29 17.4017	W089 49.3975	7,8	6	1,17
5	2-SHT_C_BS05 brown sand and shells -2 pics	N29 16.2178	W089 55.4967	8	3	4,17
6	2-SHT_C_BS06 dark brownish grey mud 2 pics	N29 16.2583	W089 54.2893	7,8	6	1
7	2-SHT_C_BS07 brown/grey mud - 2pics - IMG-4862	N29 16.2922	W089 53.0747	7,8	6	1
8	2-SHT_C_BS08 mud - dark greyish brown - 2 pics IMG-4848	N29 16.2638	W089 51.8158	7,8	6	1
9	2-SHT_C_BS09 SOFT GREY MUD 1 PICT	N29 16.3697	W089 50.7135	7	6	1
10	2-SHT_C_BS10 SOFT GREY MUD SOME SHELLS 1 PICT	N29 16.3147	W089 49.3167	7	6	1,17
11	2-SHT_C_BS11- mud and shell fragments - some fine sand dark brown - 2 pics4842	N29 15.1503	W089 55.5247	8	1,6	1,17
12	2-SHT_C_BS12 - mud - shells - dark brown - 2 pics	N29 15.1260	W089 54.2477	8	6	1,17
13	2-SHT_C_BS13 - mud - dark grey - 2 pics	N29 15.1545	W089 53.0120	7	6	1
14	2-SHT_C_BS14 SOFT GREY MUD 1 PICT	N29 15.1578	W089 51.7798	7	6	1
15	2-SHT_C_BS15 SOFT GREY MUD 1 PICT	N29 15.2347	W089 50.5472	7	6	1
16	2-SHT_C_BS16 SOFT GREY MUD 1 PICT	N29 15.2267	W089 49.3238	7	6	1
17	2-SHT_C_BS17 SOFT/STICKY GREY MUD 2 PICT	N29 14.0158	W089 54.2013	7	5,6	1
18	2-SHT_C_BS18 SOFT GREY MUD 2 PICT	N29 14.1195	W089 52.9952	7	6	1
19	2-SHT_C_BS19 SOFT GREY MUD 1 PICT	N29 14.1433	W089 51.7572	7	6	1
20	2-SHT_C_BS20 SOFT GREY MUD 2 PICT	N29 14.1413	W089 50.5015	7	6	1
21	2-SHT_C_BS21 SOFT GREY MUD FEW SHELLS 2 PICT	N29 14.1470	W089 49.2607	7	6	1,17
22	2-SHT_C_BS22 soft/sticky mud. 2 picts	N29 13.0722	W089 54.2322	7	5,6	1
23	2-SHT_C_BS23 soft grey-brown mud 1 pic	N29 13.0260	W089 52.9565	7	6	1
24	2-SHT_C_BS24 soft grey-brown mud 1 pic	N29 13.0300	W089 51.7253	7	6	1
25	2-SHT_C_BS25 soft grey mud 1 pic	N29 13.0773	W089 50.5090	7	6	1
26	2-SHT_C_BS26. soft grey mud. 1pict	N29 13.0895	W089 49.2378	7	6	1
27	2-SHT_C_BS27 soft/sticky mud. 1 pict	N29 11.8925	W089 54.1535	7	5,6	1
28	2-SHT_C_BS28 soft grey-brown mud 1 pic	N29 11.9398	W089 52.9083	7,8	6	1
29	2-SHT_C_BS29 soft grey-brown mud 1 pic	N29 11.9527	W089 51.6868	7,8	6	1
30	2-SHT_C_BS30 soft grey-brwn mud 1 pic	N29 12.0263	W089 50.4597	7,8	6	1
31	2-SHT_C_BS31. soft grey mud. 1pict	N29 11.9945	W089 49.2167	7	6	1
32	2-SHT_C_BS32soft/sticky mud. 1 pict	N29 10.8070	W089 54.1225	7	5,6	1

33	2-SHT_C_BS33. grey soft smelly mud. 1 pict	N29 10.8833	W089 52.9045	7	6	1
34	2-SHT_C_BS34. soft grey mud. 1pict	N29 10.8773	W089 51.6782	7	6	1
35	2-SHT_C_BS35 soft grey mud. 1pict	N29 10.9470	W089 50.4297	7	6	1
36	2-SHT_C_BS36. soft grey mud. 1pict	N29 10.9387	W089 49.2215	7	6	1
37	2-SHT_C_BS37 mud- greyish brown- fine 2 pics - IMG-4775	N29 09.7473	W089 54.1183	7,8	1,6	1
38	2-SHT_C_BS38 mud - greyish brown - fine 2 pics	N29 09.7985	W089 52.9195	7,8	1,6	1
39	2-SHT_C_BS39 - mud - greyish brown - fine 2pics - IMG-4769	N29 09.8188	W089 51.6537	7,8	1,6	1

Subject: RE: [Fwd: H11806 inquiry]
From: James Hailstones <JHailstones@fugro.com>
Date: Thu, 11 Mar 2010 14:48:22 -0800
To: "Castle.E.Parker" <Castle.E.Parker@noaa.gov>
CC: David Scharff <David.Scharff@noaa.gov>, Benjamin K Evans <Benjamin.K.Evans@noaa.gov>, Wesley Kitt <Wesley.Kitt@noaa.gov>, Richard T Brennan <Richard.T.Brennan@noaa.gov>, David Briggs <dbriggs@fugro.com>, Dean Moyles <dmoyles@fugro.com>

Afternoon Gene

We've gone through our records and have come up with the following info:

The SSS of that specific location was performed on Julian day 333 of 2008. The SSS imagery (line 1C04-7470) show no sign of an object at that location.

This 'AWOS'/object was determined on Julian day 088 of 2009. See photo attached. It was approximately 600m from where an AWOS was supposed to be and was therefore assigned as that.

Your query and further thought on the subject leads us to believe that object was either floating or does reach to the seabed but is in effect not anchored (and thus free to move).

I'm afraid the vessel did not physically investigate the object due to safety concerns.

Sorry for the wrong classification and hope this info helps.

Regards
James

-----Original Message-----
From: Castle.E.Parker [mailto:Castle.E.Parker@noaa.gov]
Sent: Tuesday, March 02, 2010 5:06 AM
To: James Hailstones
Cc: David Scharff; Benjamin K Evans; Wesley Kitt; Richard T Brennan
Subject: [Fwd: H11806 inquiry]

Good Day James,
On 2/25/2010 I made an inquiry to David Briggs concerning comments in the DR and lack of finding image files for a visible wreck. I have not received a response or acknowledgment concerning my request for clarification. I do not know David's schedule and would like you to pass along this inquiry to him or someone else that may be able to
answer my questions. Please review the attached original email inquiry.
If you have any question regarding this inquiry please respond.
Regards,
Gene Parker

From: David Briggs [dbriggs@fugro.com]
Sent: Friday, November 14, 2008 8:42 AM
To: Castle.E.Parker@noaa.gov; David Scharff
Cc: 'Crescent.Moegling@noaa.gov'; 'Roland Poeckert'
Subject: Revision to a DTON
Attachments: H11806 DtoN Fugro 280808.pdf

A DTON was submitted by Fugro Pelagos in August pertaining to an uncharted buoy. This buoy has
moved from its reported position and can no longer be located. I have attached a copy of the DTON
for your reference. Please let me know if you require any additional information or have any
questions.

Thanks,

David Briggs
Hydrographer

Fugro Pelagos, Inc
3738 Ruffin Rd
San Diego, CA 92123-1812
Phone: 858-292-8922
Fax: 858-292-5308
dbriggs@fugro.com
www.fugro-pelagos.com

Hydrographic Survey Registry Number: **H11806**

Survey Title: **State: LOUISIANA**
Locality: Plaquemines
Sub-locality: Vicinity of Quatre Bayou Pass

Project Number: **OPR-K977-FU-08**

Survey Dates: **September – December, 2008**

Depths are reduced to Mean Lower Low Water using verified tides.

Positions are based on the NAD83 horizontal datum.

CHARTS AFFECTED:

Chart	Scale	Edition	Edition Date
11358	80,000	20	2008-02-01 Update 73

DANGER TO NAVIGATION:

Feature	Latitude	Longitude
Green Buoy	29-11-570N	089-52-39W

COMMENTS:

Buoy is not shown on the chart. Buoy is green and marked with a white #1. The buoy appears to be associated with a seabed feature, likely an exposed pipeline.

From: Castle.E.Parker [Castle.E.Parker@noaa.gov]
Sent: Thursday, February 26, 2009 11:54 AM
To: Bryan Chauveau; Sarah Eggleston; Nicholas A Forfinski; Wesley Kitt; Edward Owens; Matthew Wilson; Anne Dollard; Daniel Seamount; David Briggs; Evan Robertson; Gary Davis; James DePasquale; James GUILFORD; Jason Infantino,; Jason Creech; Joe Burke; Jon Dasler; Paul Donaldson; Scott Croft; Scott Ramsay; Andy Orthmann; Roland Poeckert
Cc: Mark T Lathrop; Kathleen Jamison; Lori Knell; David Scharff; Castle E Parker

Subject: Field unit DtoN selection in regard to Marine Chart Division Application

Attachments: Castle.E.Parker.vcf

Good day KR field units and AHB ACOR,
This email is regard to DtoN submissions, specifically with charted pipelines that have become exposed above the sea floor. This issue is specifically applicable in the Gulf of Mexico where pipelines are very prevalent. In the past, I would have processed DtoN submissions which details pipelines that have become exposed above the sea floor (unburied), as they truly represent a Danger to surface navigation bearing in mind the water depth and the vessel's draft for those specific areas. In the past Office of Coast Survey's Marine Chart Division did apply obstructions in these specific cases. Now days, MCD has added a note to all charts that eliminate the necessity of submitting these features as Dangers. This policy reduces the number of Dangers that MCD would be required to process. The caution note indicates that anytime one sees a charted pipeline or cable area, that the mariner should use extreme caution when navigating in those charted area. This disclaimer eliminates the liability issue for NOAA by stating that not all pipelines are buried and may be exposed above the sea floor. This caution note eliminates the necessity to chart an obstruction on top a of charted pipeline or within a cable area.
In summation, if any field unit submits a Danger to Navigation that is located on top of a charted pipeline or within a cable area, AHB will not process nor submit the Danger to MCD for chart application. If the feature in question is not located directly on a pipeline then the DtoN application is warranted. It's all about location, location, location! If any field unit is in doubt, then call (757-441-6413 ext. 108) and we can discuss the specific situation. Please respond if anyone has any questions or issues with this guidance.
Regards,
Gene

H11806 COMPILATION LOG

General Survey Information	
REGISTRY No.	***H11806***
PROJECT No.	***OPR-K977-FU-08***
FIELD UNIT	***FUGRO PELAGOS, INC***
DATE OF SURVEY	***August 16, 2008, to April 3, 2009***
LARGEST SCALE CHART	***11365, 22nd. Ed., 20091201***
SOUNDING UNITS	***Feet***
COMPILER	***Norris Wike***

Source Grids	File Name
	H11806_50cm_Cube_Developments_Final.hns
	H11806_5M_VBES_ShoalExtract-Extend_Final.hns
Surfaces	**File Name**
Combined	***H11806_Combined_5m.hns***
Interpolated TIN	***H11806_10M_InterpTIN.hns***
Shifted Interpolated TIN	***H11806_10M_InterpTIN_shifted.hns***
Final HOBs	**File Name**
Survey Scale Soundings	***H11806_SS.hob,***
Chart Scale Soundings	***H11806_CS.hob***
Contour Layer	***H11806_Contours.hob***
Feature Layer	***H11806_Features.hob***
Meta-Objects Layer	***H11806_MetaLayers.hob***
Blue Notes	***H11806_BlueNotes.hob***
ENC Retain	***H11806_ENC_Retain.hob***

Meta-Objects Attribution	
Acronym	**Value**
M_COVR	
CATCOV	***1***
SORDAT	***20090403***
SORIND	***US,US,graph,H11806***
M_QUAL	
CATZOC	***6***
INFORM	***R/V LOCATOR (CF-4540-NB) and R/V CHINOOK (AK-1437-K)***
POSACC	***10***
SORDAT	***20090403***
SORIND	***US,US,graph,H11806***
SUREND	***20090403***
SURSTA	***20080816***
DEPARE	
DRVALV 1	***5.5 ft***
DRVALV2	***57.0 ft***
SORDAT	***20090403***
SORIND	***US,US,graph,H11806***

SPECIFICATIONS:

I. COMBINED SURFACE:
   a. Number of ESAR Final Grids: ***2***
   b. Resolution of Combined (m): ***5M***

II. SURVEY SCALE SOUNDINGS (SS):
   a. Radius
   b. Shoal biased
   c. Use Single-Defined Radius (mm at Map Scale): 1:50000 and 1:80,000 Radius Value = ***1***
   d. Queried Depth of All Soundings
      i. Minimum: ***5.869 ft***
      ii. Maximum: ***56.673 ft***

III. INTERPOLATED TIN SURFACE:
   a. Resolution (m): ***5M***
   b. Linear
   c. Shifted value: *[-0.229m (feet), (≤ 10 fathoms)]*
      [-1.372m (fathoms), (> 10 fathoms)]

IV. CONTOURS:
   a. Use a Depth List: ***H11806_depth_curves_list.txt***
   b. Line Object: DEPCNT
   c. Value Attribute: VALDCO

V. FEATURES:
   a. Total Number of Features: ***22***
   b. Number of Insignificant Features:

VI. CHART SURVEY SOUNDINGS (CS):
   a. Number of ENC CS Soundings: ***305***
   b. Radius
   c. Shoal biased
   d. Use Single-Defined Radius: m on the ground
      i. Radius Value (m): ***1M***
      ii. Or use a Sounding Space Range Table (if applicable):
      H 11806_CS_SoundingSpacingRange.txt
   e. Filter: Interpolated != 1
   f. Number Survey CS Soundings: ***235***

VII. Notes:

ATLANTIC HYDROGRAPHIC BRANCH
H-CELL REPORT to ACCOMPANY
SURVEY H11806 (2008-2009)

This H-Cell Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

B. DATA ACQUISITION AND PROCESSING

QUALITY CONTROL

H-Cell

The AHB source depth grid for the survey's nautical chart update product entailed the field's original 50cm multibeam grids and 5m vertical beam grid, shoal extracted at AHB. These grids were combined at 5 meter resolution. The survey scale soundings were created from the combined surface at 1mm radius at 1:50,000 and 1:80,000 for the respective chart scale areas. Use the Compilation Log above for exact values used for this process.

A TIN was created from the survey scale soundings from which an interpolated surface was generated. The chart scale soundings were selected from the filtered interpolated surface using a single defined radius at the chart scales. The chart scale selected soundings are a subset of the survey scale selected soundings. The surface model was referenced when selecting the chart scale soundings, to ensure that the selected soundings portrayed the bathymetry within the common area.

Depth contours were created from a shifted interpolated TIN surface of 10m resolution and the contours were then derived from the interpolated and non-interpolated nodes. Therefore, using this method the contour are in harmony with the SS and CS soundings while maintaining the chart equivalent contour values as whole integers. The depth contours are being forwarded to MCD for reference only. The contours were utilized during chart scale sounding selection and quality assurance efforts at AHB. The depth contours are incorporated into the SS H-Cell product as per 2009 H-Cell Specifications.

The compilation components (Stand Alone HOB files (SAHOB)) are detailed in the Compile Log attached to the Descriptive Report. The SAHOB files included depth areas (DEPARE), depth contours (DEPCNT), sounding selections (SOUNDG), features (BCNSPP, OBSTN, OFSPLT, SBDARE, WRECKS), Meta objects (M_COVR, M_QUAL, M_CSCL), and cartographic Blue Notes ($CSYMB).

All of the components with the exception of the survey scale sounding selection and depth contours were inserted into one feature layer (including the Bluenotes, as dictated by Hydrographic Technical Directive 2008-8), and this layer was exported into S-57 format in order to create the H-Cell deliverable. Similarly, the survey scale sounding selection and depth contours were exported into S-57 format separately, and then both S-57 files were processed in CARIS HOM to convert the metric units to feet.

The final products are two S-57 files, in Lat/Lon NAD-83, one that contains the Chart soundings, all the Features, Meta objects, and Bluenotes (H11806_CS.000), and one that contains the survey scale sounding selection and depth contours (H11806_SS.000). Finally, quality assurance checks were made utilizing CARIS S-57 Composer version 2.1 validation checks and DKART INSPECTOR version 5.

H11806 CARIS H-Cell final deliverables include the following products:

H11806_CS.000	1:50,000 Scale	H11806 H-Cell with Chart Scale Selected Soundings
H11806_SS.000	1:10000 Scale	H11806 Selected Soundings (Survey Scale)

Junctions

Survey H11806 has a junction with surveys H11805 (2009) to the west and H11807 (2009) to the east. Present survey soundings compare within 1 foot with H11805 (2009) and H11807 (2009).

DATA PROCESSING

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

CARIS HIPS/SIPS version 6.1 SP2, HF 1-8
CARIS Bathy DataBASE version 2.1 SP1, HF 1-10
CARIS S-57 Composer version 2.1 HF 1-4
DKART INSPECTOR, version 5.0 Build 732 SP1
CARIS HOM ENC 3.3 SP3 HF 1-8

C. HORIZONTAL AND VERTICAL CONTROL

The Hydrographer makes adequate mention of all water level and vertical datum adjustments in the Descriptive Report and Horizontal and Vertical Control Report submitted with this project.

The horizontal control used for this survey's data acquisition and H-Cell compilation is based upon the North American Datum of 1983 (NAD83), UTM projection zone 16.

D. RESULTS AND RECOMMENDATIONS

CHART COMPARISON 11358 (55th. Edition, Jun. /09)

Corrected through NM 06/06/2009
Corrected through LNM 06/02/2009
Scale 1:80,000

11365 (22nd. Edition, Dec. /09)

Corrected through NM 12/19/2009
Corrected through LNM 12/15/2009
Scale 1:50,000

ENC Comparison **US4LA32M**
Barataria Bay and approaches
Edition 27
Application Date 2010-06-22
Issue Date 2010-07-06
Chart 11358

US5LA38M
Barataria and Bayou Lafourche Waterway
Intracoastal to Gulf of Mexico
Edition 4
Application Date 2010-06-22
Issue Date 2010-06-30
Chart 11365

Hydrography

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

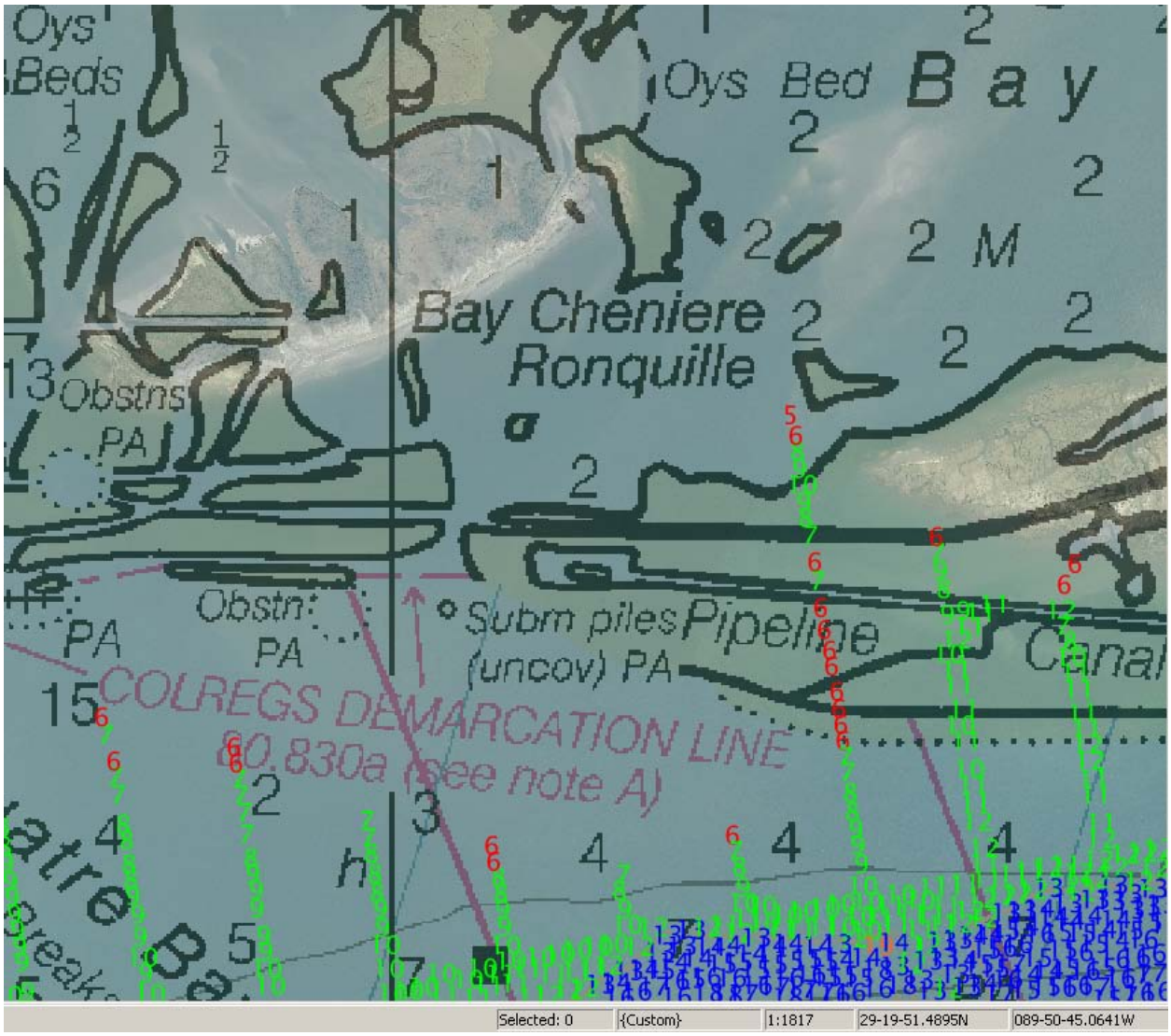
A charted ***Pipe, PA*** in Latitude 29°11'15.79"N, Longitude 089°53'57.14"W was neither verified nor disproved by present survey. It is recommended that the charted ***Pipe, PA*** be retained.

A charted ***Obstn, PA*** in Latitude 29°17'33.00"N, Longitude 089°59'38.40"W was not discussed in the present survey Descriptive Report. A review of the side scan sonar data in the vicinity of the ***Obstn, PA***, during office processing, revealed no contacts in the area. It is recommended that the ***Obstn, PA*** be deleted from the chart.

A charted ***Platform*** in Latitude 29°10'36.99"N, Longitude 089°52'30.00"W was not discussed in the present survey Descriptive Report. A review of the side scan sonar data in the vicinity of the ***Platform***, during office processing, revealed no contacts in the area. It is recommended that the ***Platform*** be deleted from the chart.

ADDITIONAL RESULTS

An email was sent to NGS.Shoreline.Request@noaa.gov requesting the most recent RSD orthoimagery for this project area. A response from Tim Blackford indicated that new shoreline has just been flown. The RSD photogrammetric project 2010_Oilspill_GulfofMexico_AERIAL_NOAA_MOSAIC has coverage over the entire survey area. With the new shoreline data collected the updates to the shoreline are not included in this H-Cell deliverable. The final shoreline corrections are deferred to MCD Source Data Branch for charting.


Oys
Beds
Oys Bed
Bay
Bay Cheniere
Ronquille
Obstns
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Obstn
PA
Subm piles
(uncov) PA
Pipeline
COLREGS DEMARCATION LINE
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Selected: 0
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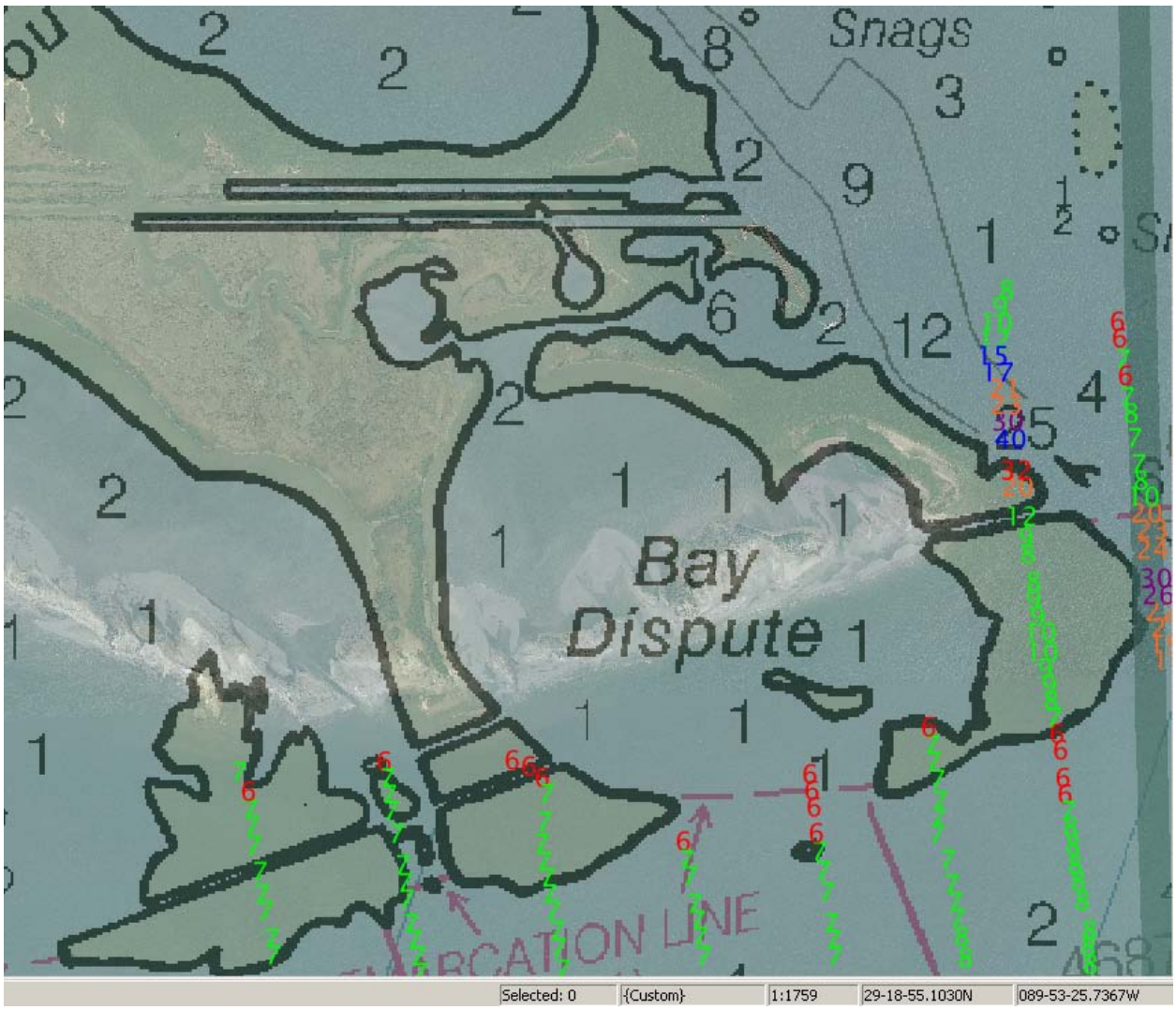
29-19-51.4895N
089-50-45.0641W


Snags
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Dispute
Selected: 0
{Custom}
1:1759
29-18-55.1030N
089-53-25.7367W

MISCELLANEOUS

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

ADEQUACY OF SURVEY

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

APPROVAL SHEET
H11806 (2008-2009)

Initial Approvals:

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

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

Norris Wike

Digitally signed by Norris Wike
DN: cn=Norris Wike, o=NOAA, ou=AHB, email=norris.a.wike@noaa.gov, c=US
Date: 2010.08.10 15:55:43 -04'00'

Norris A. Wike
Cartographer
Atlantic Hydrographic Branch

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

Richard T. Brennan
I am approving this document
2010.08.31 00:13:00 -04'00'

Approved: _____

Richard T. Brennan
Commander, NOAA
Chief, Atlantic Hydrographic Branch

Digitally signed by David Scharff
DN: cn=David Scharff, o=OCS, ou=NOAA, email=david.scharff@noaa.gov, c=US
Reason: AWOIS and Surf Check complete
Date: 2010.09.03 06:17:46 -04'00'