H11290

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey: **Navigable Area**

Registry Number: **H11290**

LOCALITY

State: Louisiana

General Locality: Gulf of Mexico

Sub-locality: 26 NM SW of Point au Fer

2005

CHIEFS OF PARTY

PS Castle E. Parker
PS Edward Owens

LIBRARY & ARCHIVES

DATE

NOAA FORM 77-28 (11-72) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
HYDROGRAPHIC TITLE SHEET	**H11290**

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

State:	**Louisiana**		
General Locality:	**Gulf of Mexico**		
Sub-Locality:	**26 NM SW of Point au Fer**		
Scale:	**1:20,000**	Date of Survey:	**04/03/05 to 07/31/05**
Instructions Dated:	**12/16/05**	Project Number:	**OPR-K354-TC-05**
Instructions Change #1 Dated:	**01/19/05**		
Instructions Change # 2 Dated:	**05/12/05**		
Vessel:	**R/V DAVIDSON**		
Chief of Party:	**PS Castle E. Parker & PS Edward Owens**		
Surveyed by:	**SAIC**		
Soundings by:	**Reson SeaBat 8101/8125/8111 multibeam echosounder**		
	Reson Navisound 515 vertical echosounder		
	Ross 875 vertical echosounder		
Graphic record scaled by:	**N/A**		
Graphic record checked by:	**N/A**		
Protracted by:	**N/A**	Automated Plot:	**N/A**
Verification by:	**Atlantic Hydrographic Branch Personnel**		
Soundings in:	**Meters at MLLW**		

Remarks:

1) All Times are UTC.
2) This is a Navigable Area Hydrographic Survey.
3) Projection is NAD-83 UTM Zone 15.

Red, Bold, Italic notes were made during office processing.

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DESCRIPTIVE REPORT

to accompany
HYDROGRAPHIC SURVEY H11290

Scale of Survey: 1:10,000
Year of Survey: 2005
R/V DAVIDSON
(NOAA Time Charter)
PS Castle E. Parker, Lead Hydrographer
PS Edward Owens, Lead Hydrographer

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-K354-TC-05*, dated December 16, 2004, and the Draft Standing Project Instructions* dated November 29, 2004. This Descriptive Report pertains to H11290, or sheet "J-west."

This project is in response to requests by the National Ocean Service (NOS) Eastern Gulf of Mexico Navigation Manager, the port and pilots of Morgan City, LA, and the U.S. Coast Guard. The majority of the charted soundings for this assigned area originate from 1935 U.S. Coast and Geodetic Survey (US C&GS) surveys. However, the charted soundings of one small portion of the assigned area originate from a 1978 US C&GS survey. The port of Morgan City supports a large local fishing fleet and many offshore oil platforms common to the area (226 within the survey area are identified in the U.S. Coast Guard database). Also there are plans for future deepening of the maintained channel from seaward to the port of Morgan City.

For complete survey limits, see the chartlet on the following page.

Filed with original field reports

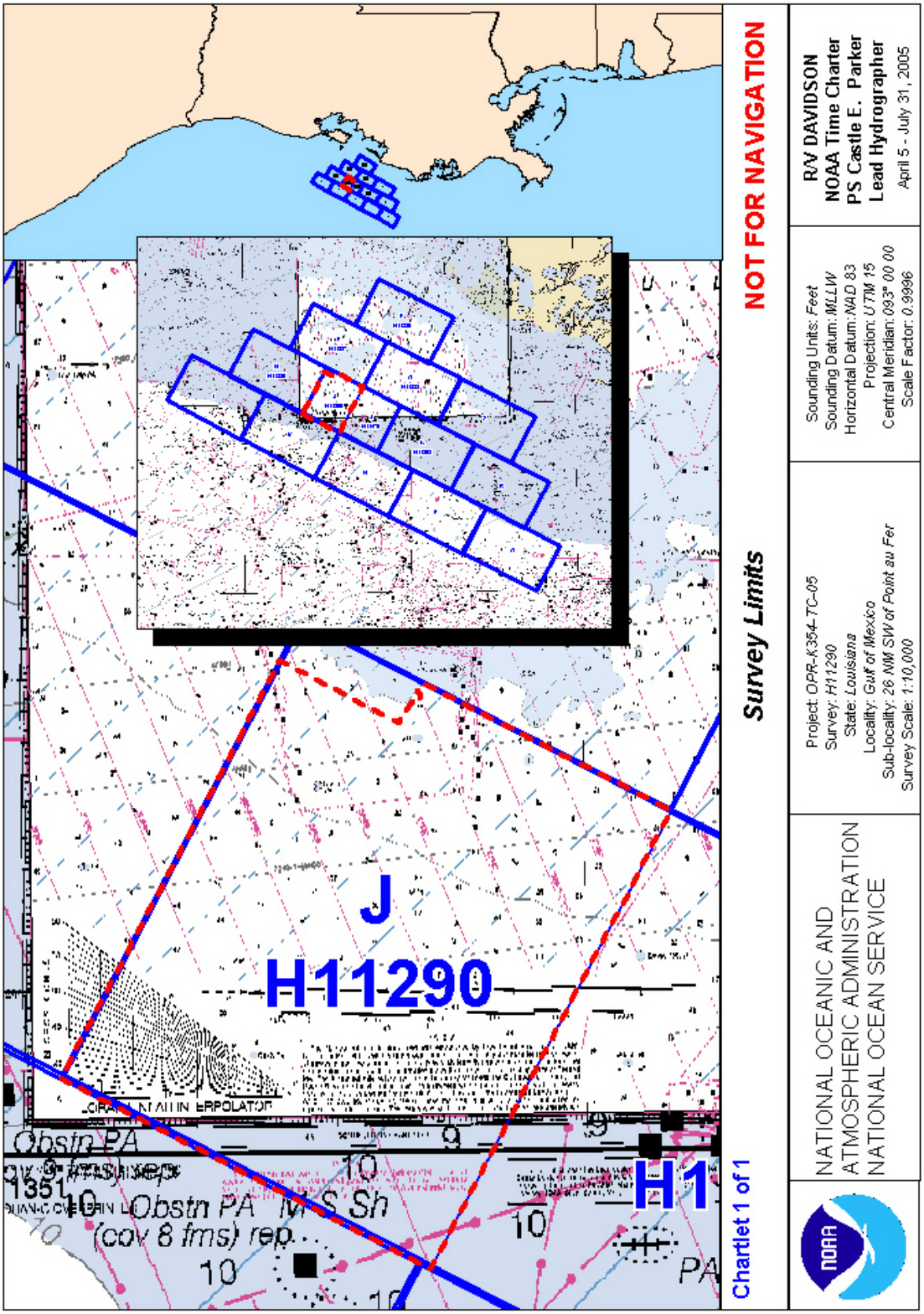


Figure 1: ***Survey Limits***

B. DATA ACQUISITION AND PROCESSING

Refer to *OPR-K354-TC-05 Data Acquisition and Processing Report (DAPR)*** for a complete description of data acquisition and processing systems, survey vessels, quality control procedures, and data processing methods. Additional information to supplement sounding and survey data and any deviations from the DAPR***** are included in this descriptive report. ***Concur.***

B.1. EQUIPMENT

Data were acquired by the R/V DAVIDSON and survey launches R2 and D2. The ship was used to acquire side-scan sonar (SSS) data, vertical beam echo sounder (VBES) data, multibeam echosounder (MBES) data, sound velocity profiles, and bottom samples in depths generally greater than 30 meters. Launches R2 and D2 acquired side-scan sonar (SSS) and multibeam echosounder (MBES) data, sound velocity profiles, and bottom samples in depths generally less than 30 meters. Vessel configurations, equipment operation, data acquisition, and processing were consistent with specifications described in the DAPR*****. ***Concur.***

Refer to the NOAA Time Charter R/V DAVIDSON *System Acceptance Test Report* and *Data Acquisition and Processing Report**** for a complete description of system integration for equipment and sensors used for this survey. ***Concur.***

B.2. QUALITY CONTROL

Side Scan Sonar Quality Control

Daily confidence checks were made by observing the outer ranges of the side scan sonar images. A good check consisted of distinguishing contacts or differences in bottom texture across the entire range of the side scan trace. Four data quality problems were encountered with both launches' side scan data (KLEIN 3000): (1) bottom tracking errors, (2) attitude artifacts, (3) thermocline interference, (4) and a noise pattern that's been attributed to cable strumming/vibration. Although the portions of lines where the latter three data quality problems prevented contact recognition were rejected and re-run, much of the accepted data are of marginal quality. The observed bottom tracking errors, although prevalent throughout the data, were not a significant data quality problem in that they did not prevent contact recognition and did not significantly affect the positioning of contacts. Following are examples of each of the observed data quality problems. ***Concur.***

****Filed with original field reports***

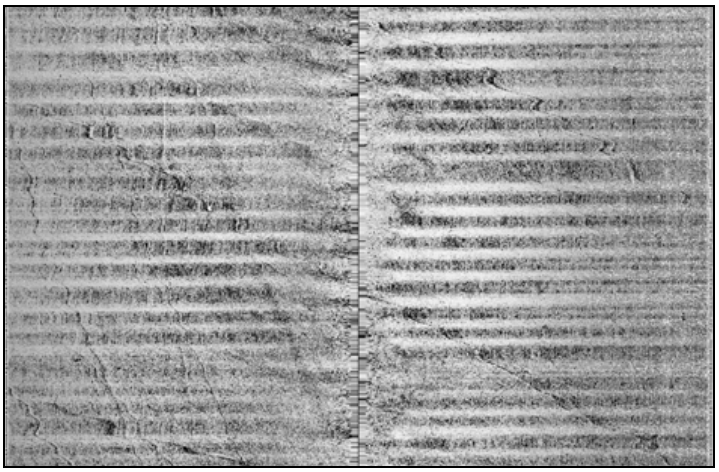


Figure 2: ***SSS Attitude Artifact***

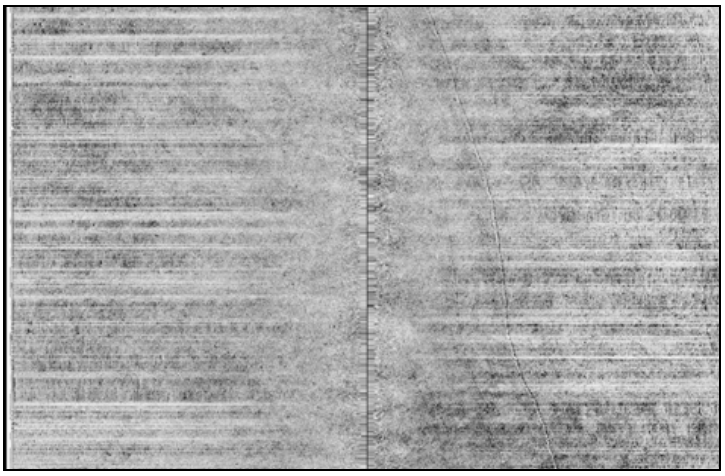


Figure 3: ***Possible Strumming-induced noise***

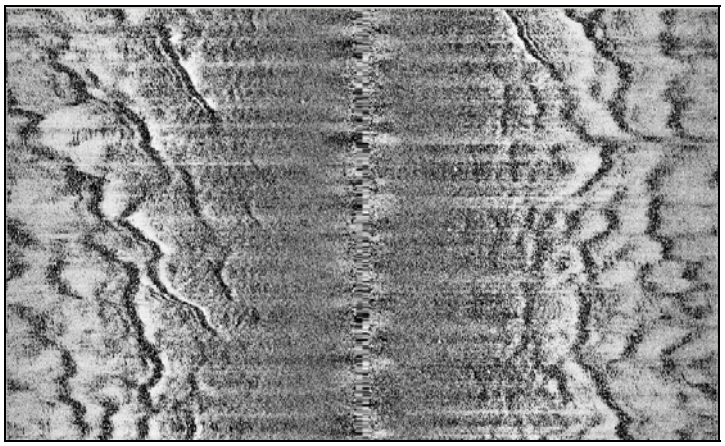


Figure 4: ***Thermocline Interference***

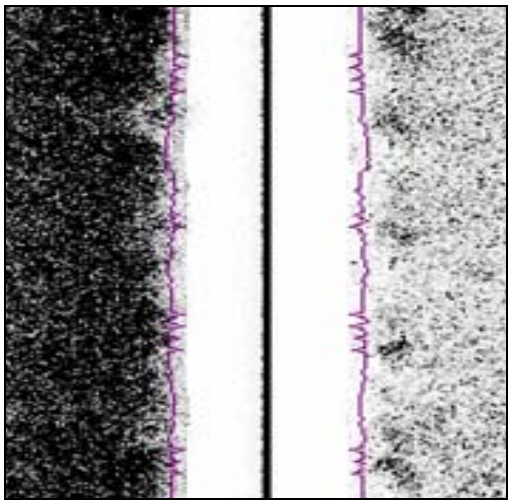


Figure 5: ***Bottom Tracking Problem***

Multibeam Echosounder Quality Control

There were seven data quality problems observed in the MBES data: (1) a systematic heave/pitch artifact, (2) a systematic timing/position error, (3) a systematic downward spike at nadir, (4) systematic sound velocity artifacts, (5) a systematic inverted "V" artifact, (6) unsystematic differences in depth attributed to bathymetry changing over time, and (7) systematic differences between the three platforms. ***Concur.***

The systematic artifact seen in figure 6 is a very subtle sinuous pattern observed in the outer ranges of DA MBES data. The error appears to be pitch and/or heave related, as a rise on one side corresponds to a rise on the opposite side. The hydrographer surmises that the artifact is not observed in the nadir region of the swath due to the excessive noise in that region (see figure 7). The artifact measures about 0.02-0.1 meters high from peak to trough and is an insignificant source of error. ***Concur.***

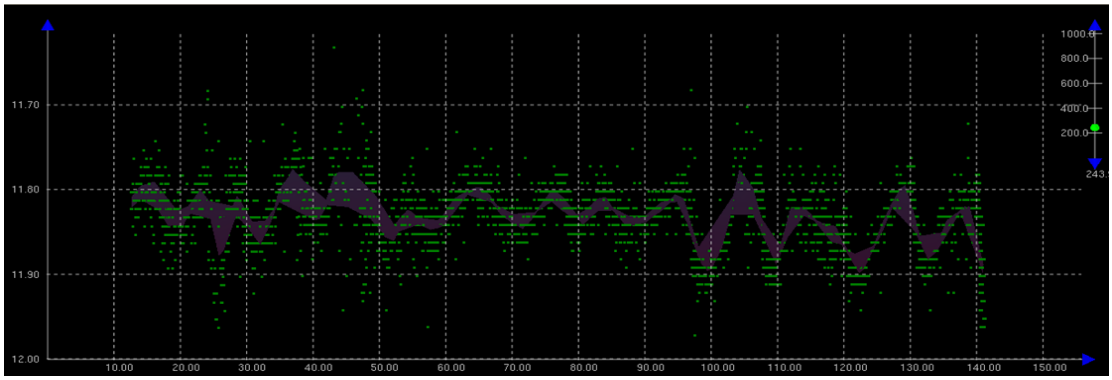


Figure 6: ***Systematic heave/pitch artifact***

The error seen in figure 7 illustrates two nonsystematic errors that the hydrographer attributes to the bottom changing over time: (1) a non-uniform vertical offset between lines run on separate days and (2) features appearing in data that were acquired on one day but not in other, overlapping data that were acquired on another day. The data in this figure (colored by line) were acquired over an approximately 2-month time span. In instances when the older data were shoaler than the more recent data, the older data were rejected. ***Concur.***

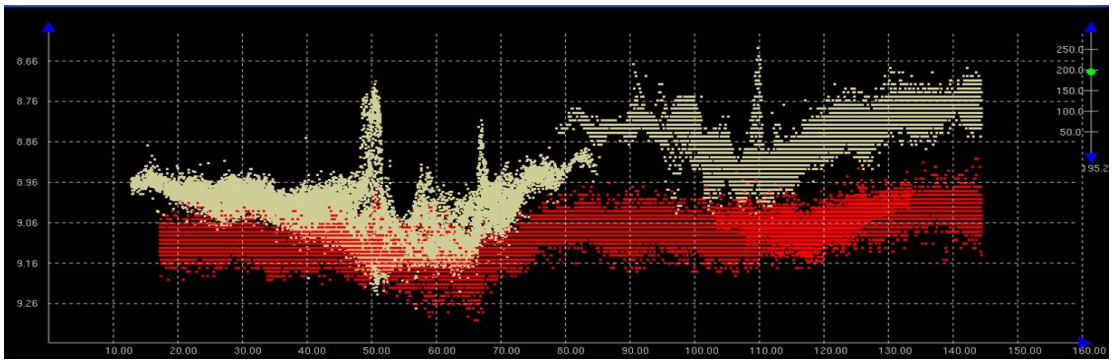


Figure 7: ***Unsystematic differences attributed to bathymetry changing over time***

The error seen in figure 8 is a 1-to-1.5-meter horizontal offset attributed to an imprecise timing bias value, GPS positioning error, or imprecise configuration file offsets. Both NOAA and SAIC personnel investigated this error, with no definitive outcome. The error is within the acceptable limits of horizontal error. ***Concur.***

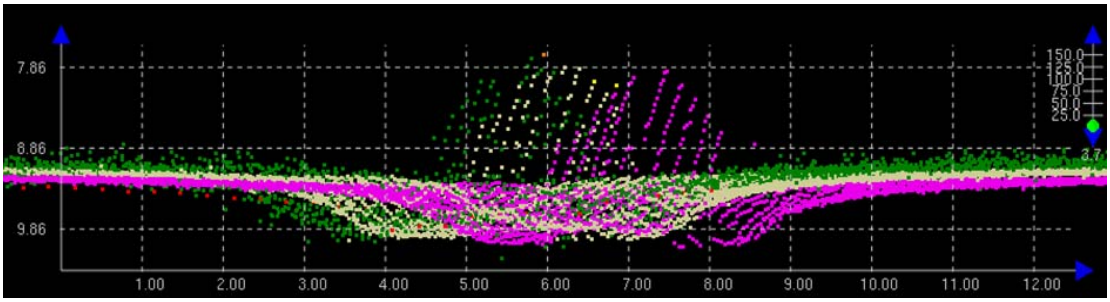


Figure 8: ***Timing/position error***

The systematic error seen in figure 9 is an across-track inverted "V." The cause of this error is unknown. The vertical distance from the upper tip of the inverted "V" to either of the two bottom points is approximately 0.3m. This systematic artifact is not a significant source of error. ***Concur.***

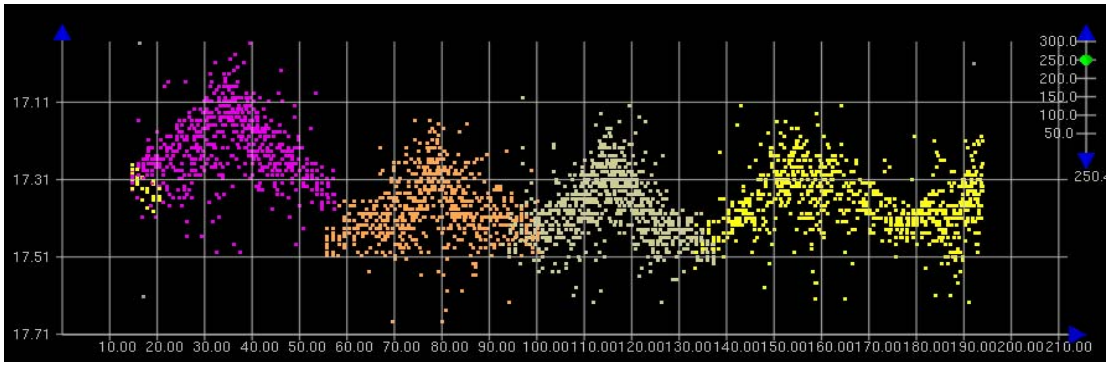


Figure 9: ***Systematic inverted "V" artifact***

The "semi-systematic" error seen in figure 10 is a downward spike at nadir that extends up to over a meter below the rest of the swath. The term "semi-systematic" is used because the artifact does not appear throughout the data; rather, it occurs in distinct geographic areas, which might possibly suggest that the error is dependent on bottom type. One idea about the origin of the artifact is that in regions with a particularly indistinct bottom resulting from high concentrations of suspended sediment, the near-nadir beams penetrate farther into the bottom than do beams with a higher grazing angle. The downward spikes in the dataset were rejected. ***Concur.***

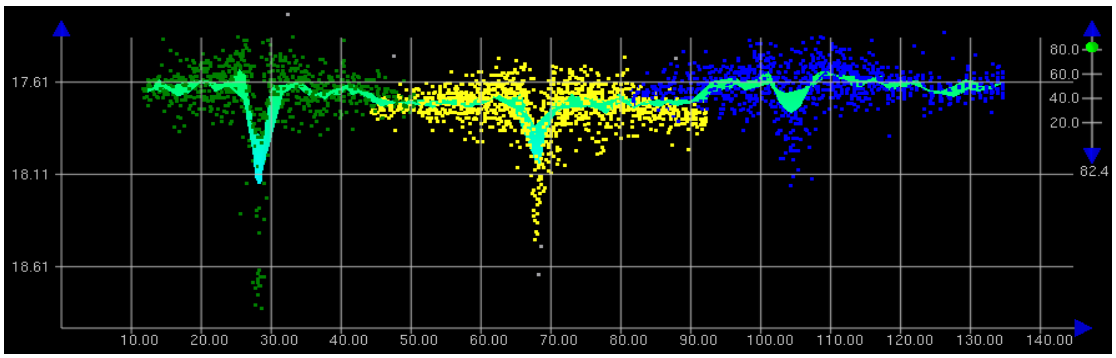


Figure 10: ***Systematic downward spike at nadir***

The systemic error seen in figure 11 is representative of a generally 0.2 to 0.5-meter vertical offset between the three platforms. In figure 11, the purple data are from DAVIDSON, and the yellow data are from launch D2. Although the hydrographer identified no definitive cause for this artifact, possible sources of error include (1) localized shifting winds causing fluctuations in water levels not accounted for in the verified water level data, (2) imprecise static draft correctors, (3) changing bathymetry over time, as the data were acquired over a 3.5-month period, and (4) differences in signal penetration of the sediment resulting from the different frequencies of the different sonars. The hydrographer quantified this error by generating 5-m resolution BASE surfaces for each vessel and then creating difference surfaces to calculate an average absolute difference between each vessel. Assuming a normal distribution of the absolute differences, the results (see table 1) suggest that this error is within the limit of acceptable error. ***Concur.***

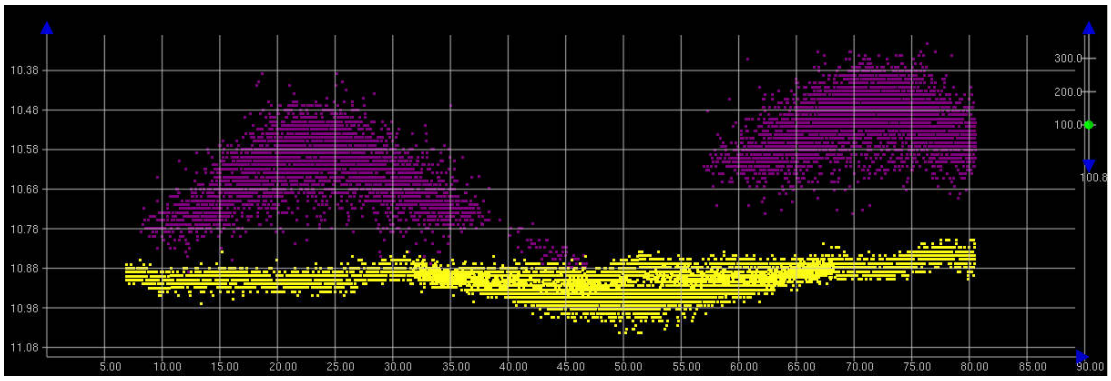


Figure 11: ***Ship-Launch Offset***

Table 1: ***Absolute Differences between Vessels***

Vessels	*Average Absolute Difference*	*Standard Deviation*
DA & D2	0.18	0.15
DA & R2	0.14	0.10
D2 & R2	0.12	0.08

BASE Surfaces

The entire survey area was gridded with 1-meter resolution; however, because of computer memory/processing and file size burdens, the survey area was divided into four CARIS fieldsheets. Each finalized uncertainty BASE (*B*athymetry *A*ssociated with *S*tatistical *E*rror) surface contains seven layers: depth, uncertainty (using the "greater of the two" option), density, mean, standard deviation, shoal, and deep. The survey's four finalized BASE surfaces are contained within fieldsheets of the same names. Also submitted is the combined surface that was generated from these four finalized BASE surfaces and then inserted into PYDRO for the chart comparison. ***Concur.***

Table 2: ***Finalized BASE Surfaces***

Name	*Resolution*
H11290_1m_NW	1 meter
H11290_1m_NE	1 meter
H11290_1m_SW	1 meter
H11290_1m_SE	1 meter

Refer to this project's DAPR* for a detailed discussion of BASE surface generation and processing methods.
Filed with original field records.

Crosslines

Although the QC reports suggest that the data generally do not meet IHO order 1 specifications, the validity of these results should be viewed with caution, as the CARIS QC tool compares individual HDCS soundings from crosslines to a mainscheme BASE surface rather than comparing a BASE surface generated from crossline data to a mainscheme BASE surface. After comparing a crossline BASE surface to a mainscheme BASE surface at a number of sample points, the hydrographer has confidence that the differences between the modeled crossline depths and the modeled mainscheme depths generally do indeed fall within the range of acceptable IHO order 1 error. ***Concur with clarification. A surface QC report was computed for each submitted surface. All surfaces meet the IHO Order 1 specification.***

R/V DAVIDSON, Launch R2, and Launch D2 acquired 209.36 nautical miles of MBES crosslines (about 6.4% of the approximately 3260 nm of mainscheme MBES data). Rather than generating a single QC report, which would have required generating a prohibitively large 1-m BASE surface covering the entire survey area, the hydrographer generated four separate HIPS 6.0 QC reports, each portraying a different portion of the survey area. Note that the QC reports do not classify the results according to multibeam system, i.e., the results represent the data as a whole, not any single sonar. ***Concur.***

CARIS60_QCreport_NE.txt suggests that, within the area covered by fieldsheet H11290_1m_NE, 79 out of 240 beams (beams 14 - 92) do not meet 95% IHO order 1 specifications. ***A surface QC report was computed for this surface. The surface meets IHO Order 1 specifications.***

CARIS60_QCreport_NW.txt suggests that, within the area covered by fieldsheet H11290_1m_NW, 240 out of 240 beams (beams 1 - 240) do not meet 95% IHO order 1 specifications. ***A surface QC report was computed for this surface. The surface meets IHO Order 1 specifications.***

CARIS60_QCreport_SE.txt suggests that, within the area covered by fieldsheet H11290_1m_SE, 93 out of 95 beams (beams 1 - 93) do not meet 95% IHO order 1 specifications. ***A surface QC report was computed for this surface. The surface meets IHO Order 1 specifications.***

CARIS60_QCreport_SW.txt suggests that, within the area covered by fieldsheet H11290_1m_SW, 86 out of 88 beams (beams 8 - 93) do not meet 95% IHO order 1 specifications. ***A surface QC report was computed for this surface. The surface meets IHO Order 1 specifications.***

Junctions

Hydrographic survey H11290 junctions with hydrographic surveys H11288, H11475, H11415, and H11468. There is good general agreement between modeled grid depths from all surveys. For each junction survey, the hydrographer subtracted the H11290

combined surface from the junction-survey combined surface and then computed an average difference by averaging the absolute values of the differences between the two surfaces. The average absolute difference for each junction survey is shown in table 2. It should be noted that the resolutions of the H11475 and H11468 combined surfaces (4 meters and 5 meters, respectively) were not the same as the resolution of the H11290 combined surface (2 meters); however, this difference in resolution is not viewed as a major concern because of the generally-flat bathymetry in the area. ***Concur.***

Table 3: ***Junction Surveys***

Junction Survey	*Average Absolute Difference*	*Standard Deviation*
H11288	0.12	0.10
H11475	0.13	0.08
H11415	0.10	0.08
H11468	0.14	0.10

B.3. CORRECTIONS TO ECHO SOUNDINGS

There are no deviations from those described in the "Correction to Echo Soundings" section of the DAPR*. ***Concur.***

C. VERTICAL AND HORIZONTAL CONTROL

VERTICAL CONTROL

The vertical datum for this project is Mean Lower-Low Water (MLLW). The operating National Water Level Observation Network (NWLON) primary tide station at Eugene Island, LA, (876-4311) will serve as control for datum determination and as the primary source for water level reducers for survey H11290. ***Concur.***

A Request for Approved Tides letter was sent to N/OPS1 on 04 October 2005 (Appendix IV*). Verified water levels were downloaded from the N/OPS1 CO-OPS website and applied to all sounding data during office processing. Refer DAPR* for a summary of the methods used to determine, evaluate, and apply tide corrections to sounding data. ***Concur.***

The final zones and correctors used for this survey are in table 3.

Table 4: ***Final Tide Zones & Correctors***

Zone Name	*Corrector (min)*	*RATIO*	*Reference*
WGM281	24	0.90	876-4311
WGM280	36	0.87	876-4311

****Filed with original field reports***

HORIZONTAL CONTROL

The horizontal datum for this project is the North American Datum of 1983 (NAD83). Differential GPS (DGPS) was the sole method of positioning. Differential corrections from U.S. Coast Guard beacons at English Turn, LA (293 kHz), and Galveston, TX (296 kHz), were used during this survey. ***Concur.***

D. RESULTS AND RECOMMENDATIONS

D.1. CHART COMPARISON

There are two raster charts and three ENCs affected by this survey:

Table 5: ***Affected Raster Navigational Charts (RNCs)***

Number	*Version*	*Edition Date*	*Scale*
11351	39	11/01/2004	1:80,000
11340	70	08/01/2005	1:458,596

Table 6: ***Affected Electronic Navigational Charts (ENCs)***

Cell Name	*Chart*	*Edition*	*Update Application Date*	*Issue Date*
US4LA21M	11351	6	2005-09-29	2006-02-08
US3GC03M	11340	6	2005-11-28	2006-02-03
US2GC11M	4015	4	2005-05-14	2006-02-02

General Agreement with Charted Depths

The charted depths were compared to a PYDRO-generated sounding set derived from a combined surface that was created from the four finalized surface described in the Multibeam Echosounder Quality Control section. Overall, there is excellent agreement between the survey and charted depths, with survey depths typically less than 2 feet deeper than charted. ***Concur.***

Dangers to Navigation (DtoNs)

A total of six DtoNs were found and reported to Marine Chart Division (MCD). One preliminary DtoN (with observed water levels applied) was submitted on 6/6/05, two DtoNs (with final tides applied) were submitted on 4/20/06, and three DtoNs (with final tides applied) were submitted on 7/10/06. After final tides were applied to the first DtoN, the least depth of the feature changed by 0.12 meters. A follow-up DtoN

report was not submitted to MCD because the cartographically rounded depth did not change. The DtoNs are discussed in Appendix 2*. ***Concur.***

AWOIS Items

The item investigation reports describing this survey's two full investigation AWOIS items are contained in Appendix 2*. ***Concur.***

Significant Uncharted Features

The item investigation reports describing four significant uncharted features are contained in Appendix 2*. ***Concur.***

Non-AWOIS Charted Features & Notes

The item investigation reports describing five non-AWOIS charted features are contained in Appendix 2*. ***Do not concur. Seventeen charted platforms are included in the item investigation report, no other charted non-AWOIS items were included.***

D.2. ADDITIONAL RESULTS

Prior Surveys

This survey overlaps three prior NOAA surveys:

Table 7: ***Prior NOAA surveys***

Survey	*Year*
H09789	1978
H05953	1935
H05938	1935

Aids to Navigation and Other Detached Positions

In general, there is good agreement between charted and observed oil platforms; however, three charted oil platforms were not observed and are addressed as charted features in Appendix 2*. There are no floating aids to navigation within the survey area. ***Concur.***

Bridges and Overhead Cables

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

Ferry Routes

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

Filed with original field reports

Submarine Cables and Pipelines

There are numerous charted pipelines within the survey limits. The hydrographer recommends retaining pipelines as charted. ***Concur.***

Shoreline

There is no shoreline in the survey area. ***Concur.***

Bottom Samples

Twenty bottom samples were acquired during this survey; however, the bottom samples were not retained. The hydrographer recommends superseding existing charted bottom samples with bottom samples from the current survey. ***Concur.***

Table 8: ***Bottom Samples***

Latitude	*Longitude*	*Sample Name*	*Description*
28° 58' 54.90"	91° 47' 49.90"	da_bsp_35	sft gy m
28° 57' 53.30"	91° 45' 41.30"	da_bsp_30	sft gy M
28° 56' 37.40"	91° 44' 26.40"	da_bsp_13	sft gy m
28° 56' 51.30"	91° 43' 29.80"	da_bsp_29	sft gy M
28° 59' 01.10"	91° 42' 24.50"	da_bsp_12	sft gy M
28° 59' 47.90"	91° 44' 27.00"	da_bsp_031	sft gy M S brk Sh
29° 0' 32.10"	91° 46' 16.30"	da_bsp_03	sft gy M stk M
29° 2' 45.90"	91° 45' 43.00"	da_bsp_01	sft gy M
29° 1' 35.80"	91° 44' 55.30"	da_bsp_06	sft gy M
29° 1' 33.80"	91° 43' 02.90"	da_bsp_07	sft gy M
29° 1' 39.10"	91° 42' 06.60"	da_bsp_15	gy M Sh
29° 0' 49.10"	91° 42' 21.70"	da_bsp_04	gy M Sh
29° 0' 38.00"	91° 41' 01.70"	da_bsp_28	sft gn gy M
29° 1' 44.10"	91° 41' 57.50"	da_bs_15	gy S Sh
29° 0' 50.60"	91° 42' 21.90"	da_bs_4	gy M
29° 2' 50.80"	91° 41' 12.30"	da_bs_5	gy S Sh
29° 3' 21.20"	91° 43' 46.00"	da_bs_2	br fne S Sh
29° 2' 31.00"	91° 39' 45.60"	da_bs_27	br M Sh
29° 0' 39.20"	91° 41' 08.00"	da_bs_28	gy M
28° 59' 34.40"	91° 47' 52.90"	da_bsp_14	sft gy m

E. APPROVAL SHEET

OPR-K354-TC-05
Louisiana
Gulf of Mexico
26 NM SW of Point au Fer

Survey Registry No. H11290

Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy. All bathymetry models, this Descriptive Report, and all accompanying records and data are approved.

This survey is adequate to supersede all prior surveys in common areas and for application to the relevant NOS nautical charts.

Also submitted in association with this descriptive report has been a series of reports and data:

- OPR-K354-TC-05 Data Acquisition and Processing Report *3/30/06*
- OPR-K354-TC-05 Horizontal and Vertical Control Report *5/9/07*
- OPR-K354-TC-05 Tides and Water Levels Package *10/24/05*
- OPR-K354-TC-05 Coast Pilot Report *5/7/07*

Respectfully Submitted:

Nicholas A. Forfinski
Hydrographer

Approved and Forwarded:

Digitally signed by Castle Eugene Parker
DN: cn=Castle Eugene Parker, c=US, o=NOAA, ou=Atlantic Hydrographic Branch, email=castle.e.parker@noaa.gov
Reason: I attest to the accuracy and integrity of this document
Date: 2008.07.30 06:39:17 -04'00'

PS Castle E. Parker
Lead Hydrographer

Edward Owens
I am approving this document
2007.09.19 12:28:05 -04'00'

PS Edward Owens
Lead Hydrographer

APPENDIX I: DANGER TO NAVIGATION REPORTS

Submitted with the digital data are the three PYDRO-generated DtoN reports that were submitted to MCD:

DtoN Letter #1 - 6/6/05
DtoN Letter #2 - 4/20/06
DtoN Letter #3 - 7/10/06

H11290 - Dangers to Navigation

Registry Number: H11290

State: Louisiana

Locality: Gulf of Mexico

Sub-locality: 26 NM SW of Point au Fer

Project Number: OPR-K354-TC-05

Survey Dates: 05/11/2005 - 07/07/2005

Charts Affected

Number	Version	Date	Scale
11351	39th Ed.	11/01/2004	1:80000
1116A	70th Ed.	08/01/2005	1:458596
11340	70th Ed.	08/01/2005	1:458596
411	50th Ed.	09/01/2005	1:2160000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	DTON - frame structure	Obstruction	12.46 m	29° 01' 16.774" N	091° 47' 39.780" W	---
1.2	DTON - 16-ft obstrn	Obstruction	5.09 m	29° 04' 35.000" N	091° 45' 31.920" W	---
1.3	DTON - 23-ft obstrn	Obstruction	6.94 m	29° 03' 35.564" N	091° 45' 15.826" W	---
1.4	DTON - small debris pile	Obstruction	9.11 m	29° 02' 50.464" N	091° 46' 03.918" W	---
1.5	DTON - obstruction	Obstruction	7.66 m	29° 03' 16.401" N	091° 44' 48.535" W	---
1.6	DTON - 20-ft obstrn	Obstruction	6.14 m	29° 03' 07.926" N	091° 41' 57.684" W	---

1 - DR_DToN

1.1) DTON - frame structure

DANGER TO NAVIGATION

Survey Summary

Survey Position: 29° 01' 16.774" N, 091° 47' 39.780" W

Least Depth: 12.46 m

Timestamp: 2005-188.16:56:49.093 (07/07/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-188 / d2mba05188_d19

Profile/Beam: 437/26

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth on a 1.8-meter high, rectangular structure that was located with 200% SSS (KLEIN 3000) and is covered with 100% MBES (RESON 8101). ***This DtoN was submitted to MCD on 04/20/06.***

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-188/d2mba05188_d19	437/26	0.00	000.0	Primary
h11290/d2_sss_200/2005-188/d2_188_050707165500	0002	0.73	220.2	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707165500	0001	1.76	248.0	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707170100	0001	3.31	182.4	Secondary
h11290/da_sss_100/2005-132/da_132_050512043500	0001	10.19	278.4	Secondary
h11290/da_sss_200/2005-132/da_132_050512071700	0001	11.16	289.1	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as a dangerous obstruction with a least depth of 41 feet at 29°01'16.774" N, 091°47'39.780" W.

Cartographically-Rounded Depth (Affected Charts):

41ft (11351_1)

6 ¾fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam
	VALSOU - 12.460 m
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification.

Obstn with LD 41FT is charted on the continual update raster as of 2/19/2008.

[Image file k:/finished_surveys/opr-k354-tc-05/sheetj_h11290/h11290/pss/screengrabs/dton_frame-like_structure.jpg does not exist.]

Feature Images

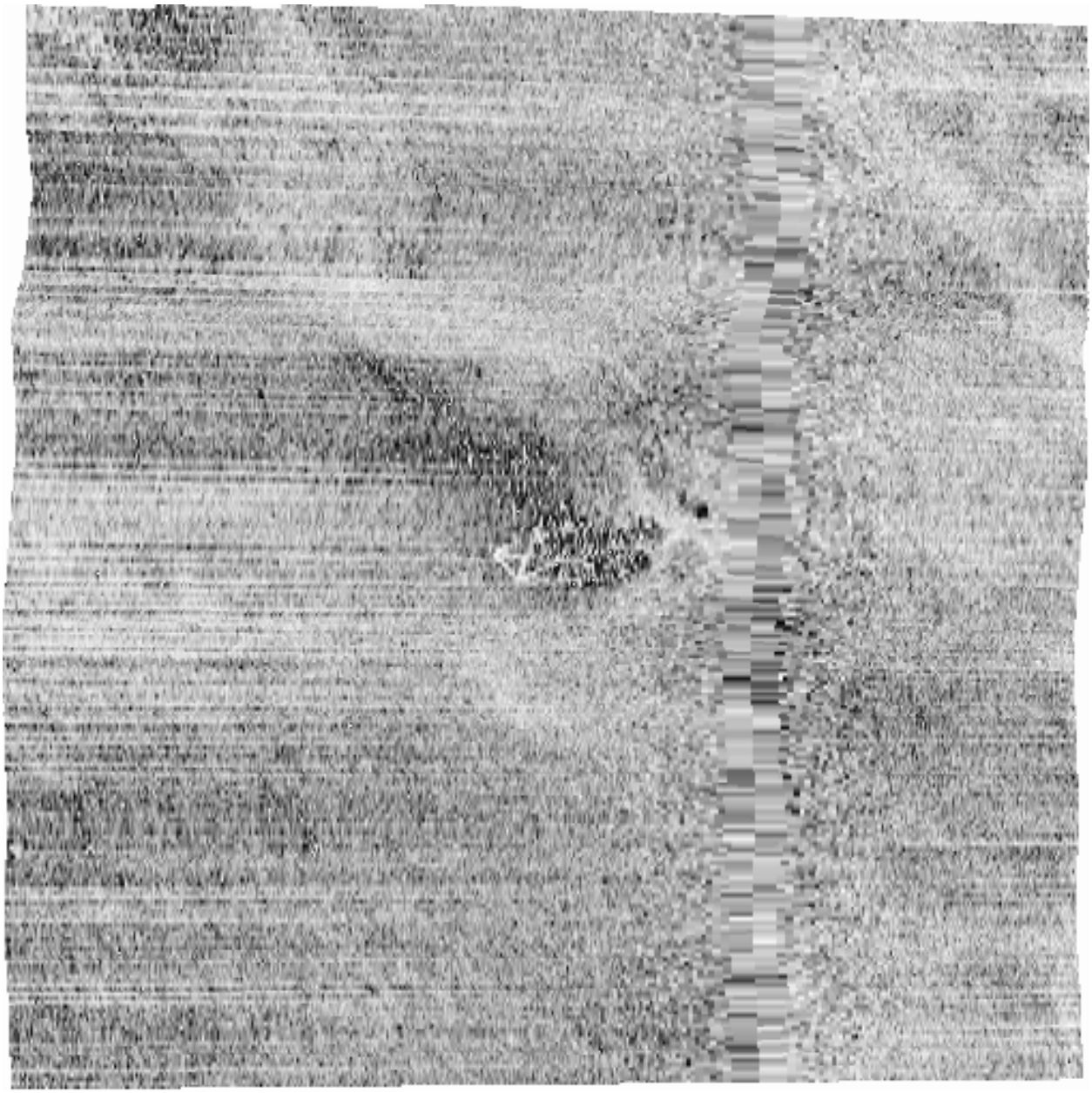


Figure 1.1.1

1.2) DTON - 16-ft obstrn

DANGER TO NAVIGATION

Survey Summary

Survey Position: 29° 04' 35.000" N, 091° 45' 31.920" W

Least Depth: 5.09 m

Timestamp: 2005-188.18:24:51.617 (07/07/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-188 / d2mba05188_d28

Profile/Beam: 536/31

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth over an uncharted obstruction detected with 200% SSS (KLEIN 3000) and developed with 100% MBES (RESON 8101). The feature is the shoalest of three clustered similar items and is located approximately 90 meters from the center of a charted oil platform. ***This DtoN was submitted to MCD on 07/10/06.***

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-188/d2mba05188_d28	536/31	0.00	000.0	Primary
h11290/r2_sss_100/2005-130/r2_130_050510184700	0001	0.89	026.5	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707183000	0001	1.53	351.1	Secondary
h11290/d2_sss_200/2005-130/d2_130_050510192900	0001	2.37	294.1	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as a dangerous obstruction with a least depth of 16 feet at 29°04'35.000"N, 091°45'31.920"W.

Cartographically-Rounded Depth (Affected Charts):

16ft (11351_1)

2 ¾fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 5.087 m
WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification.

Obstn with LD 16FT is charted on the continual updated raster as of 2/19/2008.

Feature Images

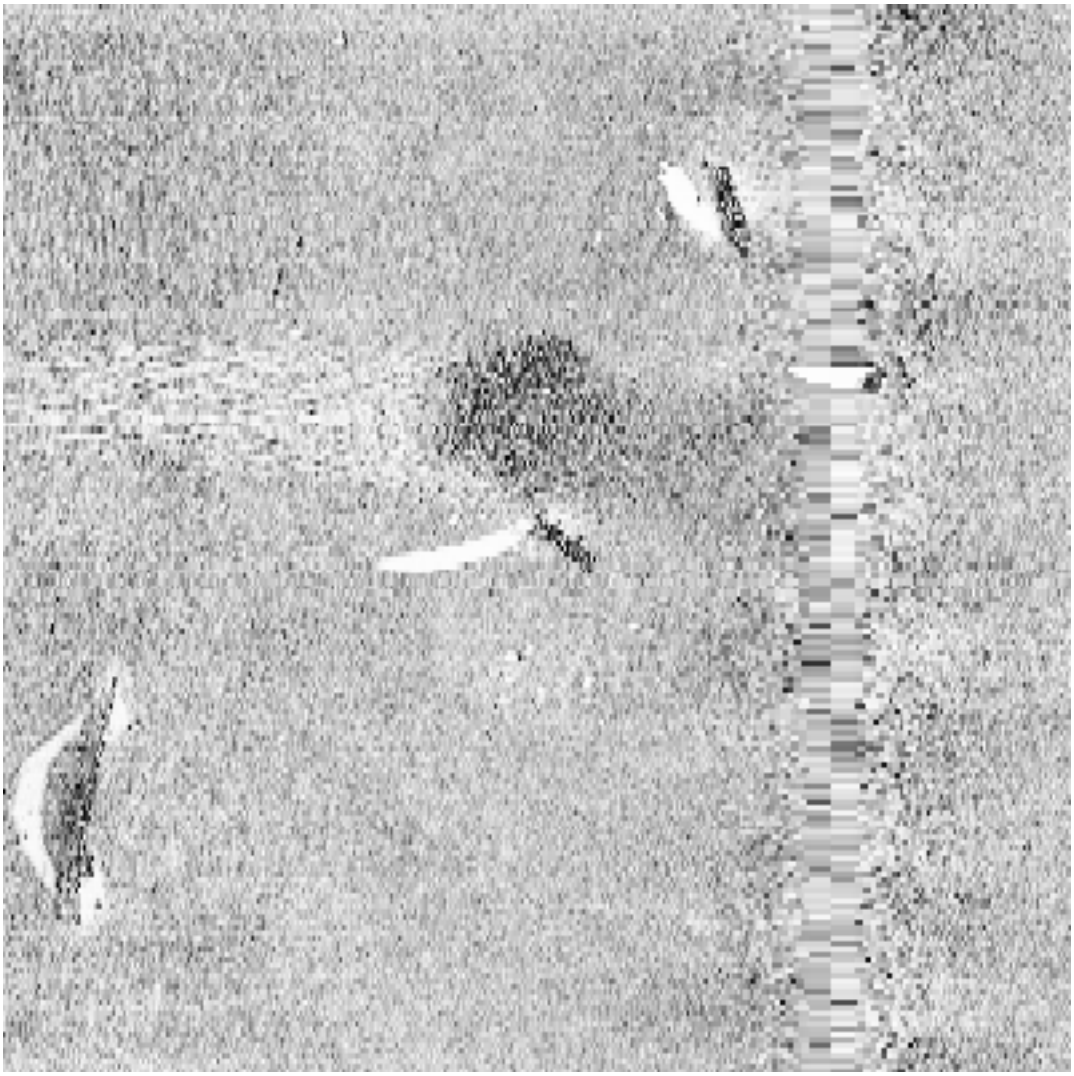


Figure 1.2.1

[Image file k:/finished_surveys/opr-k354-tc-05/sheetj_h11290/h11290/pss/screengrabs/536_31_sc.png does not exist.]

1.3) DTON - 23-ft obstrn

DANGER TO NAVIGATION

Survey Summary

Survey Position: 29° 03' 35.564" N, 091° 45' 15.826" W

Least Depth: 6.94 m

Timestamp: 2005-188.19:25:12.341 (07/07/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-188 / d2mba05188_d36

Profile/Beam: 505/58

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth on an obstruction that appears to be an exposed cable/pipeline. The feature was detected with 200% SSS data (KLEIN 3000) and developed with 100% MBES data (RESON 8101). The feature is one of seven exposed pipeline features in the general vicinity. DtoN was submitted to MCD on 07/10/06.***

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-188/d2mba05188_d36	505/58	0.00	000.0	Primary
h11290/d2_sss_200/2005-188/d2_188_050707192400	0001	0.97	244.6	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707193000	0001	1.44	037.4	Secondary
h11290/d2_sss_200/2005-137/d2_137_050517193200	0001	2.10	294.3	Secondary
h11290/r2_sss_100/2005-137/r2_137_050517140400	0001	4.47	321.1	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as a dangerous obstruction with a least depth of 23 feet at 29°03'35.564"N, 091°45'15.826"W.

Cartographically-Rounded Depth (Affected Charts):

23ft (11351_1)

3 ¾fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 6.939 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification.

Obstn with LD 23FT is charted on the continual update raster as of 2/19/2008.

Feature Images

Figure 1.3.1

[Image file k:/finished_surveys/opr-k354-tc-05/sheetj_h11290/h11290/pss/screengrabs/505_58_sc.png does not exist.]

1.4) DTON - small debris pile

DANGER TO NAVIGATION

Survey Summary

Survey Position: 29° 02' 50.464" N, 091° 46' 03.918" W

Least Depth: 9.11 m

Timestamp: 2005-131.09:39:20.464 (05/11/2005)

Survey Line: h11290 / tpe_da_mb_0 / 2005-131 / damba05131b_d14

Profile/Beam: 39695/97

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth over an uncharted 1.8-meter high obstruction detected with 200% SSS (KLEIN 5000) and covered with 100% MBES (a combination of RESON 8111 and RESON 8101). ***This DtoN was submitted to MCD on 04/20/06.***

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_da_mb_0/2005-131/damba05131b_d14	39695/97	0.00	000.0	Primary
h11290/d2_sss_200/2005-188/d2_188_050707174400	0001	1.58	214.9	Secondary
h11290/da_sss_100/2005-131/da_131_050511092900	0001	4.24	289.3	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707173800	0001	4.41	276.8	Secondary
h11290/da_sss_200/2005-131/da_131_050511061400	0001	5.99	228.6	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as a dangerous obstruction as per the feature's position and least depth.

Cartographically-Rounded Depth (Affected Charts):

30ft (11351_1)

5fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam
	VALSOU - 9.113 m
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification.

Obstn with LD 30FT charted on continual update raster as of 2/19/2008.

[Image file k:/finished_surveys/opr-k354-tc-05/sheetj_h11290/h11290/pss/screengrabs/dton_debris.jpg does not exist.]

Feature Images

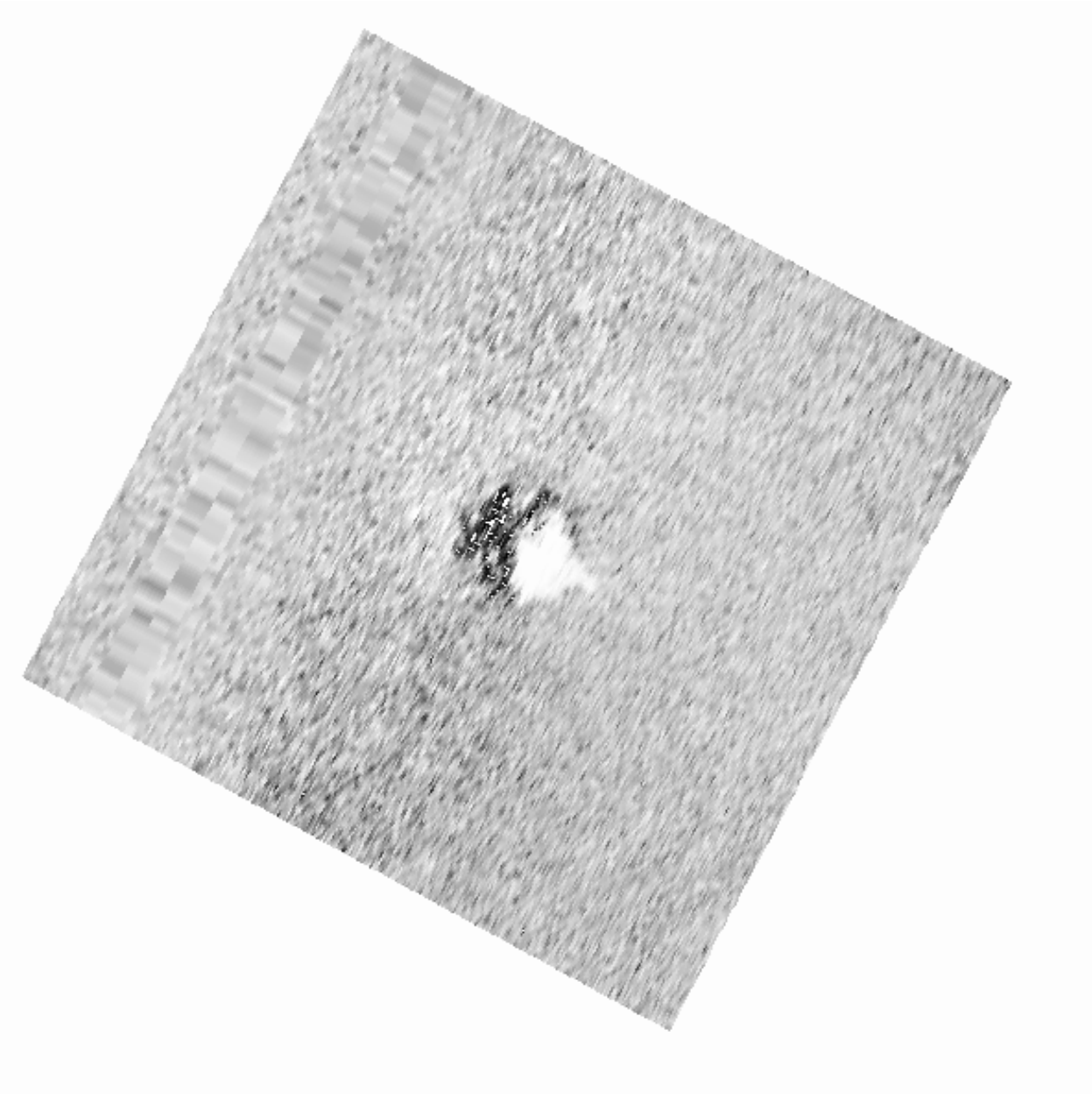


Figure 1.4.1

1.5) DTON - obstruction

DANGER TO NAVIGATION

Survey Summary

Survey Position: 29° 03' 16.401" N, 091° 44' 48.535" W

Least Depth: 7.66 m

Timestamp: 2005-174.09:14:11.334 (06/23/2005)

Survey Line: h11290 / tpe_da_mb_0 / 2005-174 / damba05174_d16

Profile/Beam: 16140/41

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the updated least depth over a DtoN that was submitted with a preliminary least depth. This specific feature (i.e., ping/beam) was not resubmitted because the cartographically rounded depth did not change. Although the DtoN was charted as an obstruction, it was charted with an accompanying "PA," which was not part of the original recommendation. The feataure was located with 200% SSS data (KLEIN 3000) and is covered with MBES data (a combinatio of RESON 8111 and RESON 8125). The least depth is from the RESON 8111 data. ***This DtoN was submitted to MCD on 06/06/05.***

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_da_mb_0/2005-174/damba05174_d16	16140/41	0.00	000.0	Primary
h11290/d2_sss_200/2005-127/d2_127_050507163200	0001	1.78	148.6	Secondary
h11290/da_sss_100/2005-174/da_174_050623085900	0001	1.91	024.9	Secondary
h11290/d2_sss_200/2005-127/d2_127_050507155000	0001	6.33	331.0	Secondary

Hydrographer Recommendations

The hydrographer recommends retaining the charted dangerous obstruction, but removing the "PA" because the hydgrographer has a high level of confidence in the positioning of the feature.

Cartographically-Rounded Depth (Affected Charts):

25ft (11351_1)

4 ¼fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 7.663 m

Office Notes

Concur with clarification.

Obstn with LD 25FT is charted on the continual update raster as of 2/19/2008

[Image file k:/finished_surveys/opr-k354-tc-05/sheetj_h11290/h11290/pss/screengrabs/dton_exposed-cable-pipeline_loop.jpg does not exist.]

Feature Images

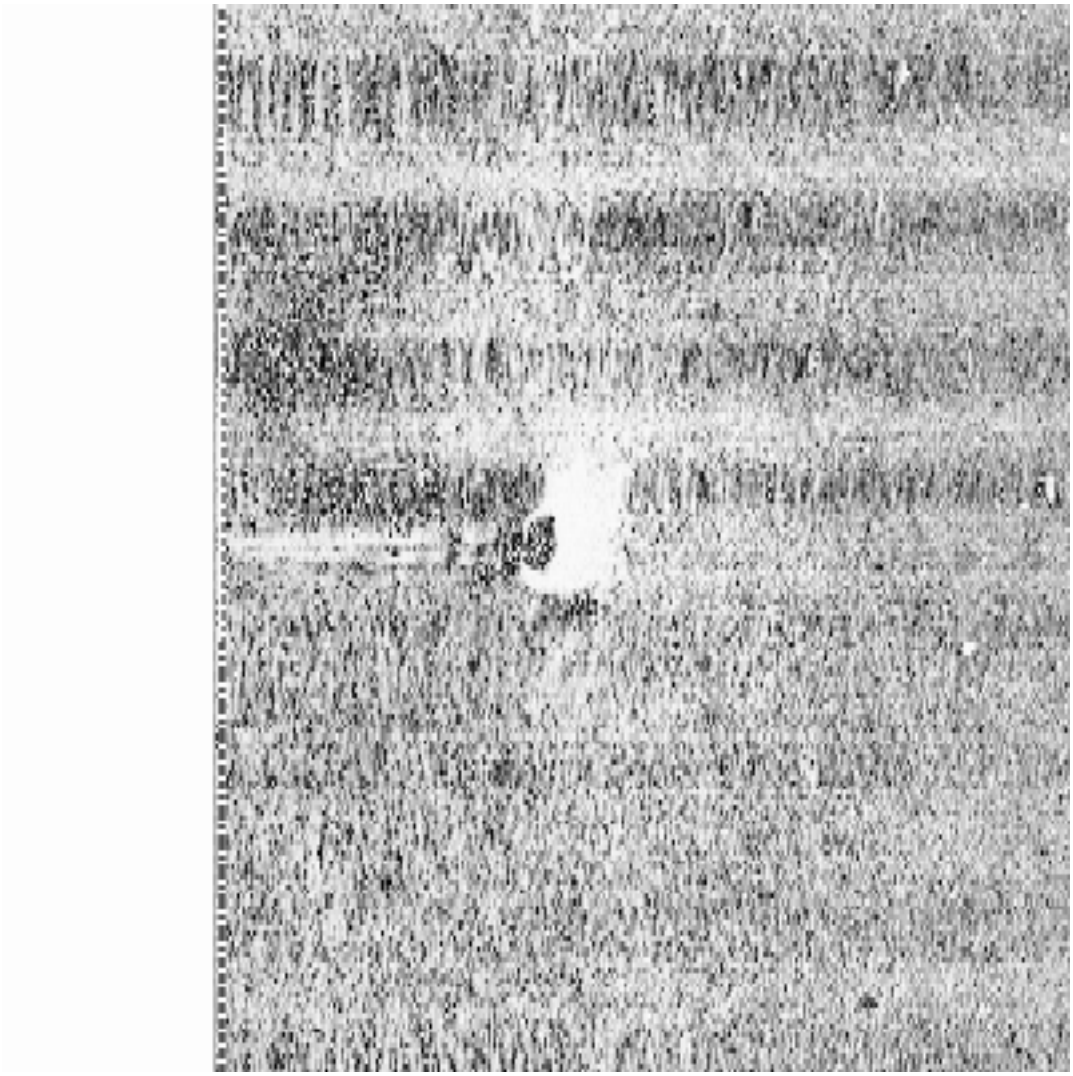


Figure 1.5.1

1.6) DTON - 20-ft obstrn

DANGER TO NAVIGATION

Survey Summary

Survey Position: 29° 03' 07.926" N, 091° 41' 57.684" W

Least Depth: 6.14 m

Timestamp: 2005-188.19:01:38.673 (07/07/2005)

Survey Line: h11290 / tpe_r2_mb_0 / 2005-188 / r2mba05188_d25

Profile/Beam: 560/42

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is what was determined to be the least depth over a man-made obstruction detected with 200% SSS (KLEIN 3000) and covered with 100% MBES (a combination of RESON 8101 and RESON 8125). The feature is not a definitive least depth, because distinguishing the very narrow object from the surrounding noise was difficult; however, a conservative least depth was picked from the pool of likely candidates. DtoN was submitted to MCD on 07/10/06.***

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_r2_mb_0/2005-188/r2mba05188_d25	560/42	0.00	000.0	Primary
h11290/r2_sss_100/2005-131/r2_131_050511145600	0001	0.78	008.2	Secondary
h11290/d2_sss_200/2005-132/d2_132_050512163300	0004	3.55	241.8	Secondary
h11290/d2_sss_100/2005-212/d2_212_050731134800	0001	3.73	293.6	Secondary
h11290/d2_sss_200/2005-132/d2_132_050512163300	0001	4.28	219.0	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as a dangerous obstruction with a least depth of 20 feet at 29°03'07.926"N, 091°41'57.684"W.

Cartographically-Rounded Depth (Affected Charts):

20ft (11351_1)

3 ¼fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 6.145 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification.

Obstn with LD 20FT charted on continual update raster as of 2/19/2008.

Feature Images

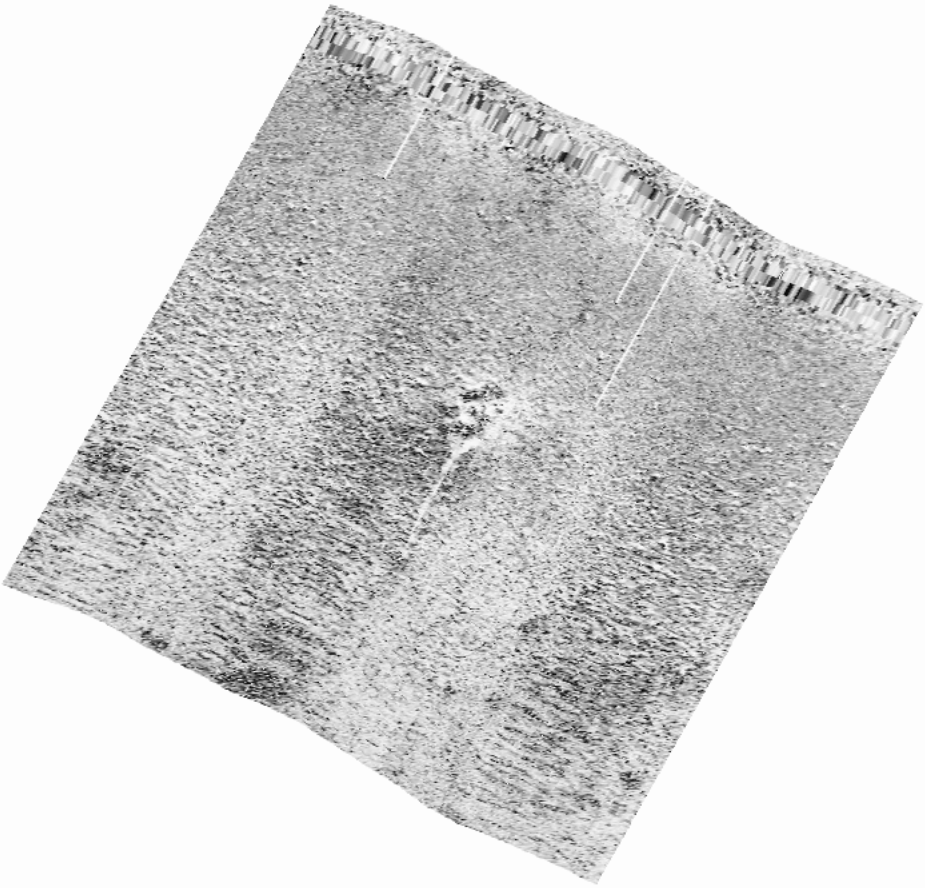


Figure 1.6.1

APPENDIX II: SURVEY FEATURE REPORTS

Following are item investigation reports detailing four groups of features:

a) Dangers to Navigation (DtoNs)
b) AWOIS Items
c) Significant Uncharted Features
d) Non-AWOIS Charted Features & Notes

H11290 - AWOIS Items

Registry Number: H11290

State: Louisiana

Locality: Gulf of Mexico

Sub-locality: 26 NM SW of Point au Fer

Project Number: OPR-K354-TC-05

Survey Date:

Charts Affected

Number	Version	Date	Scale
11351	39th Ed.	11/01/2004	1:80000
1116A	70th Ed.	08/01/2005	1:458596
11340	70th Ed.	08/01/2005	1:458596
411	50th Ed.	09/01/2005	1:2160000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	CITY OF TOLEDO	AWOIS	[no data]	[no data]	[no data]	---
1.2	UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---

1 - DR_AWOIS

1.1) AWOIS #324 - CITY OF TOLEDO

No Primary Survey Feature for this AWOIS Item

Search Position: 29° 04' 00.810" N, 091° 43' 00.430" W

Historical Depth: [None]

Search Radius: 500

Search Technique: S2,MB,ES,DI,SD

Technique Notes: [None]

History Notes:

HISTORY NM32/42--PORTION OF WK APPROXIMATELY 4 FT ABOVE WATER DESCRIPTION 24 NO.527; TANKER, 8192 GT, SUNK 6/12/42 BY SUBMARINE; POSITION ACCURACY 1-3 MILES, NAME; CIT S. TOLEDO 27 NO.484: TKR, 5128 NT, SUNK 6/12/42. PORTION OF WRECK PROTRUDES APPROX. 4 FT ABOVE WATER. NAME: CITIES SERVICE TOLEDO H-9787 DISCREPTIVE REPORT THE VISIBLE WRECK AT LAT. 29/04 N, LON. 091/43 W. WAS INVESTIGATED BY HYDROGRAPHY (100 METER LINE SPACING) AND BY AN IMPROVISED WIRE-DRAG. NO INDICATION OF THIS WRECK WAS FOUND. RECOMMEND REVISING THIS WRECK TO SUBMERGED DANGEROUS TO NAGIVATION "EXISTENCE DOUBTFUL". (ENTERED BY KRW 12/11/2003)

Survey Summary

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature represents AWOIS item 324. No objects were found within the 500-m search radius, which was covered with 200% SSS data (KLEIN 3000) and "skunk-stripe" MBES data (a combination of RESON 8101 and RESON 8125).

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-K354-TC-05-revised	AWOIS # 324	0.00	000.0	Primary
h11290/r2_sss_100/2005-188/r2_188_050707192900	0002	17.07	268.1	Secondary
ChartGPs - ENC US4LA21M	Danger 4	47.55	288.5	Secondary (grouped)
h11290/d2_sss_200/2005-131/d2_131_050511200400	0002	56.26	288.3	Secondary

Hydrographer Recommendations

The hydrographer recommends deleting the charted wreck, existance doubtful.

S-57 Data

[None]

Office Notes

Concur. Remove charted WK ED.

1.2) AWOIS #12016 - UNKNOWN

No Primary Survey Feature for this AWOIS Item

Search Position: 28° 59' 00.800" N, 091° 46' 00.400" W

Historical Depth: [None]

Search Radius: 1000

Search Technique: S2,MB,ES,DI,SD

Technique Notes: [None]

History Notes:

CHARTED AS OBSTRUCTION BUT IS A WRECK. CGD8 LNM 1/84, 01/04/84; REPORTS THE DANGEROUS SUNKEN WRECK PA, OF A JACK UP BARGE IN LAT. 28/59N, LON.91/46 W. (NAD27) THREE LEGS AND THE TOP OF THE CABIN ARE EXTENDING ABOVE THE WATER. THE WRECK IS UNMARKED. COMPOLATION NOTE ON CHART HISTORY INDICATED WRECK WAS CHARTED AS A VISIBLE OBSTRUCTION, PA. UNASCERTAINED SOURCE MAKING THE OBSTRUCTION SUBMERGED. (ENTERED 12/03 BY KRW)

Survey Summary

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature represents AWOIS item 12016. No object was observed within the 1000-m search radius, which was covered with 200% SSS and skunk-stripe MBES.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-K354-TC-05-revised	AWOIS # 12016	0.00	000.0	Primary
h11290/tpe_da_mb_0/2005-127/damba05127b_d26	7492/63	0.21	245.4	Secondary
ChartGPs - ENC US4LA21M	Danger 1	1.08	124.0	Secondary

Hydrographer Recommendations

The hydrographer recommends deleting the charted "Obstn PA."

S-57 Data

[None]

Office Notes

Concur. Remove charted Obstn PA.

H11290 - Charted Features

Registry Number: H11290

State: Louisiana

Locality: Gulf of Mexico

Sub-locality: 26 NM SW of Point au Fer

Project Number: OPR-K354-TC-05

Survey Dates: 04/20/2005 - 07/29/2005

Charts Affected

Number	Version	Date	Scale
11351	39th Ed.	11/01/2004	1:80000
1116A	70th Ed.	08/01/2005	1:458596
11340	70th Ed.	08/01/2005	1:458596
411	50th Ed.	09/01/2005	1:2160000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Charted Oil Platform - ATON 5	Platform (oil or gas)	[None]	29° 02' 35.519" N	091° 41' 58.563" W	---
1.2	Charted Oil Platform - ATON 9	Platform (oil or gas)	[None]	29° 04' 32.646" N	091° 45' 29.799" W	---
1.3	charted platform	Platform (oil or gas)	[None]	29° 04' 20.425" N	091° 45' 26.393" W	---
1.4	Charted Oil Platform - ATON 6	Platform (oil or gas)	[None]	29° 03' 03.612" N	091° 41' 54.821" W	---
1.5	Charted Oil Platform - ATON 11	Platform (oil or gas)	[None]	29° 05' 07.218" N	091° 45' 34.767" W	---
1.6	Charted Oil Platform	Platform (oil or gas)	16.44 m	28° 59' 34.623" N	091° 47' 05.132" W	---
1.7	Charted Oil Platform - ATON 21	Platform (oil or gas)	7.42 m	29° 04' 11.234" N	091° 42' 04.679" W	---
1.8	Charted Oil Platform - ATON 19	Platform (oil or gas)	[None]	29° 04' 02.205" N	091° 41' 59.673" W	---
1.9	Charted Platform	Platform (oil or gas)	[None]	29° 04' 31.043" N	091° 42' 10.230" W	---
1.10	Charted Platform	Platform (oil or gas)	[None]	29° 04' 06.433" N	091° 42' 12.096" W	---
1.11	Charetd Oil Platform - ATON 23	Platform (oil or gas)	[None]	29° 04' 17.887" N	091° 42' 11.818" W	---
1.12	charted platform	Platform (oil or gas)	[None]	29° 03' 24.832" N	091° 41' 53.809" W	---
1.13	Charted Platform	Platform (oil or gas)	[None]	29° 03' 42.015" N	091° 41' 53.100" W	---
1.14	Charted Platform	Obstruction	8.78 m	29° 03' 27.655" N	091° 45' 07.069" W	---
1.15	MOI-EI-94-1 (platform)	Platform (oil or gas)	[None]	29° 03' 02.884" N	091° 45' 11.714" W	---

Generated by Pydro v7.3 (r2252) on Wed Apr 09 10:26:26 2008 [UTC]

1.16	LL&E-EI-110-1 (platform)	Platform (oil or gas)	[None]	29° 02' 29.202" N	091° 42' 13.500" W	---
1.17	MOI-EI-93-9C&10C (platform)	Platform (oil or gas)	[None]	29° 05' 06.000" N	091° 45' 31.000" W	---

1 - DR_Charted

1.1) Charted Oil Platform - ATON 5

Survey Summary

Survey Position: 29° 02' 35.519" N, 091° 41' 58.563" W

Least Depth: [None]

Timestamp: 2005-126.20:53:45 (05/06/2005)

Survey Line: h11290 / d2_sss_200 / 2005-126 / d2_126_050506204000

Contact/Point: 0001/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an oil platform approximately 35 meters from the center of a charted oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/d2_sss_200/2005-126/d2_126_050506204000	0001	0.00	000.0	Primary
h11290/r2_sss_100/2005-127/r2_127_050507184200	0001	8.79	200.2	Secondary
h11290/d2_sss_200/2005-130/d2_130_050510141600	0002	10.51	025.5	Secondary
ChartGPs - ENC US4LA21M	AToN 5	30.97	312.7	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends retaining the oil platform as charted.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: INFORM - charted platform

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.2) Charted Oil Platform - ATON 9

Survey Summary

Survey Position: 29° 04' 32.646" N, 091° 45' 29.799" W

Least Depth: [None]

Timestamp: 2005-130.19:34:37 (05/10/2005)

Survey Line: h11290 / d2_sss_200 / 2005-130 / d2_130_050510192900

Contact/Point: 0003/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an oil platform at the position of an oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/d2_sss_200/2005-130/d2_130_050510192900	0003	0.00	000.0	Primary
h11290/r2_sss_100/2005-130/r2_130_050510212800	0001	5.55	198.5	Secondary
ChartGPs - ENC US4LA21M	AToN 9	29.52	312.8	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends retaining the oil platform as charted.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: INFORM - SAIC contact charted platform

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.3) charted platform

Survey Summary

Survey Position: 29° 04' 20.425" N, 091° 45' 26.393" W

Least Depth: [None]

Timestamp: 2005-130.16:00:24 (05/10/2005)

Survey Line: h11290 / r2_sss_100 / 2005-130 / r2_130_050510155600

Contact/Point: 0001/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an oil platform approximately 70 meters from the center of a charted oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/r2_sss_100/2005-130/r2_130_050510155600	0001	0.00	000.0	Primary
h11290/d2_sss_200/2005-131/d2_131_050511131500	0001	0.77	048.3	Secondary
ChartGPs - ENC US4LA21M	AToN 18	27.67	337.4	Secondary (grouped)

Hydrographer Recommendations

The hydrographer defers the charting recommendation to MCD, Nautical Data Branch, Source Date Unit.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: INFORM - Charted platform on 11351, not on 11340

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.4) Charted Oil Platform - ATON 6

Survey Summary

Survey Position: 29° 03' 03.612" N, 091° 41' 54.821" W

Least Depth: [None]

Timestamp: 2005-131.17:18:06 (05/11/2005)

Survey Line: h11290 / d2_sss_200 / 2005-131 / d2_131_050511170300

Contact/Point: 0001/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an oil platform approximately 30 meters from the center of a charted oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/d2_sss_200/2005-131/d2_131_050511170300	0001	0.00	000.0	Primary
h11290/r2_sss_100/2005-131/r2_131_050511170400	0001	5.79	195.7	Secondary
h11290/d2_sss_100/2005-212/d2_212_050731135400	0001	10.19	185.0	Secondary
ChartGPs - ENC US4LA21M	AToN 6	29.24	310.5	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends retaining the oil platform as charted.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: INFORM - Charted platform contact on SSS (long shadow) on 100% 200% (R2_131_0505111704 verified

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.5) Charted Oil Platform - ATON 11

Survey Summary

Survey Position: 29° 05' 07.218" N, 091° 45' 34.767" W

Least Depth: [None]

Timestamp: 2005-132.16:18:32 (05/12/2005)

Survey Line: h11290 / r2_sss_100 / 2005-132 / r2_132_050512161600

Contact/Point: 0001/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an oil platform approximately 55 meters from the center of a charted oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/r2_sss_100/2005-132/r2_132_050512161600	0001	0.00	000.0	Primary
h11290/d2_sss_200/2005-199/d2_199_050718154000	0001	5.85	280.2	Secondary
ChartGPs - ENC US4LA21M	AToN 11	43.02	331.1	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends retaining the oil platform as charted.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: INFORM - SAIC contact charted oil platform verified

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.6) Charted Oil Platform

Survey Summary

Survey Position: 28° 59' 34.623" N, 091° 47' 05.132" W

Least Depth: 16.44 m

Timestamp: 2005-188.15:58:22.399 (07/07/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-188 / d2mba05188_d13

Profile/Beam: 239/83

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is a sounding near the center of the base of an oil platform observed approximately 100 meters from the center of a charted oil platform

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-188/d2mba05188_d13	239/83	0.00	000.0	Primary
h11290/da_sss_200/2005-129/da_129_050509234200	0001	8.14	079.4	Secondary
h11290/da_sss_100/2005-207/da_207_050726190000	0001	15.39	298.8	Secondary
h11290/da_sss_200/2005-207/da_207_050726192500	0002	17.75	301.1	Secondary
h11290/da_sss_100/2005-207/da_207_050726191300	0002	17.86	136.1	Secondary
h11290/da_sss_200/2005-207/da_207_050726193800	0001	18.95	136.7	Secondary
ChartGPs - Digitized	1	95.57	267.5	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends retaining the oil platform as charted.

Cartographically-Rounded Depth (Affected Charts):

54ft (11351_1)

9fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.7) Charted Oil Platform - ATON 21

Survey Summary

Survey Position: 29° 04' 11.234" N, 091° 42' 04.679" W

Least Depth: 7.42 m

Timestamp: 2005-188.22:17:36.378 (07/07/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-188 / d2mba05188_d44

Profile/Beam: 10900/84

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an oil platform approximately 23 meters from the center of a charted oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-188/d2mba05188_d44	10900/84	0.00	000.0	Primary
h11290/r2_sss_100/2005-185/r2_185_050704172700	0001	1.30	120.8	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707220400	0002	3.00	147.6	Secondary
h11290/r2_sss_100/2005-185/r2_185_050704151500	0001	6.11	108.5	Secondary
ChartGPs - ENC US4LA21M	AToN 21	33.39	320.8	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends retaining the oil platform as charted.

Cartographically-Rounded Depth (Affected Charts):

24ft (11351_1)

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

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.8) Charted Oil Platform - ATON 19

Survey Summary

Survey Position: 29° 04' 02.205" N, 091° 41' 59.673" W

Least Depth: [None]

Timestamp: 2005-194.14:07:49 (07/13/2005)

Survey Line: h11290 / d2_sss_200 / 2005-194 / d2_194_050713135600

Contact/Point: 0001/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an oil platform approximately 25 meters from the center of a charted oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/d2_sss_200/2005-194/d2_194_050713135600	0001	0.00	000.0	Primary
h11290/r2_sss_100/2005-202/r2_202_050721185800	0001	2.39	280.2	Secondary
h11290/d2_sss_200/2005-210/d2_210_050729213900	0001	2.74	246.5	Secondary
ChartGPs - ENC US4LA21M	AToN 19	26.93	337.9	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends retaining the oil platform as charted.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: INFORM - Class 0:

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.9) Charted Platform

Survey Summary

Survey Position: 29° 04' 31.043" N, 091° 42' 10.230" W

Least Depth: [None]

Timestamp: 2005-194.20:36:34 (07/13/2005)

Survey Line: h11290 / d2_sss_200 / 2005-194 / d2_194_050713202400

Contact/Point: 0001/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an oil platform approximately 20 meters from the center of a charted oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/d2_sss_200/2005-194/d2_194_050713202400	0001	0.00	000.0	Primary
h11290/r2_sss_100/2005-185/r2_185_050704214200	0001	3.19	217.2	Secondary
h11290/r2_sss_100/2005-185/r2_185_050704212900	0001	5.03	139.8	Secondary
ChartGPs - ENC US4LA21M	AToN 20	33.46	344.5	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends retaining the oil platform as charted.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: INFORM - Class 0:

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.10) Charted Platform

Survey Summary

Survey Position: 29° 04' 06.433" N, 091° 42' 12.096" W

Least Depth: [None]

Timestamp: 2005-194.21:16:22 (07/13/2005)

Survey Line: h11290 / d2_sss_200 / 2005-194 / d2_194_050713210400

Contact/Point: 0002/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an oil platform at the position of a charted oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/d2_sss_200/2005-194/d2_194_050713210400	0002	0.00	000.0	Primary
h11290/d2_sss_200/2005-194/d2_194_050713135600	0002	8.04	292.4	Secondary
h11290/r2_sss_100/2005-202/r2_202_050721185800	0002	10.08	220.4	Secondary
ChartGPs - ENC US4LA21M	AToN 24	13.68	348.9	Secondary (grouped)
h11290/d2_sss_200/2005-210/d2_210_050729213900	0002	16.41	265.3	Secondary

Hydrographer Recommendations

The hydrographer recommends retaining the oil platform as charted.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: INFORM - Class 0:

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.11) Charetd Oil Platform - ATON 23

Survey Summary

Survey Position: 29° 04' 17.887" N, 091° 42' 11.818" W

Least Depth: [None]

Timestamp: 2005-185.15:56:21 (07/04/2005)

Survey Line: h11290 / r2_sss_100 / 2005-185 / r2_185_050704154700

Contact/Point: 0001/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an oil platform approximately 50 meters from the center of a charted oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/r2_sss_100/2005-185/r2_185_050704154700	0001	0.00	000.0	Primary
h11290/d2_sss_200/2005-194/d2_194_050713143300	0001	2.60	076.6	Secondary
h11290/d2_sss_100/2005-212/d2_212_050731154500	0001	2.71	323.6	Secondary
ChartGPs - ENC US4LA21M	AToN 23	35.35	321.2	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends retaining the oil platform as charted.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: INFORM - Class 0:

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.12) charted platform

Survey Summary

Survey Position: 29° 03' 24.832" N, 091° 41' 53.809" W

Least Depth: [None]

Timestamp: 2005-210.14:42:53 (07/29/2005)

Survey Line: h11290 / d2_sss_200 / 2005-210 / d2_210_050729144100

Contact/Point: 0001/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an oil platform approximately 30 meters from the center of a charted oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/d2_sss_200/2005-210/d2_210_050729144100	0001	0.00	000.0	Primary
h11290/d2_sss_200/2005-185/d2_185_050704165000	0001	3.22	180.5	Secondary
h11290/r2_sss_100/2005-132/r2_132_050512135900	0001	3.27	214.2	Secondary
ChartGPs - ENC US4LA21M	AToN 7	33.88	319.6	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends retaining the oil platform as charted.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.13) Charted Platform

Survey Summary

Survey Position: 29° 03' 42.015" N, 091° 41' 53.100" W

Least Depth: [None]

Timestamp: 2005-210.17:29:22 (07/29/2005)

Survey Line: h11290 / d2_sss_200 / 2005-210 / d2_210_050729171000

Contact/Point: 0001/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an oil platform approximately 30 meters from the center of a charted oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/d2_sss_200/2005-210/d2_210_050729171000	0001	0.00	000.0	Primary
h11290/r2_sss_100/2005-194/r2_194_050713170200	0001	6.32	017.0	Secondary
h11290/d2_sss_200/2005-185/d2_185_050704203800	0001	6.38	088.1	Secondary
h11290/r2_sss_100/2005-188/r2_188_050707204400	0001	6.50	096.9	Secondary
ChartGPs - ENC US4LA21M	AToN 8	31.59	355.0	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends retaining the oil platform as charted.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Office Notes

Concur with clarification. Defer charting recommendation to MCD.

1.14) Charted Platform

Survey Summary

Survey Position: 29° 03' 27.655" N, 091° 45' 07.069" W

Least Depth: 8.78 m

Timestamp: 2005-110.15:53:39.753 (04/20/2005)

Survey Line: h11290 / tpe_r2_mb_0 / 2005-110 / r2mba05110_d03

Profile/Beam: 52634/21

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth of an abandoned well-head located at the position of a charted oil platform. The object was detected with 200% SSS data (KLEIN 3000) and is covered with the outer beamsMBES data (RESON 8101). No oil platform was observed in either the SSS or MBES data.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_r2_mb_0/2005-110/r2mba05110_d03	52634/21	0.00	000.0	Primary
h11290/r2_sss_100/2005-110/r2_110_050420155000	0001	1.35	348.4	Secondary
h11290/d2_sss_200/2005-127/d2_127_050507163200	0002	3.27	262.8	Secondary
h11290/d2_sss_200/2005-115/d2_115_050425130000	0002	5.21	273.3	Secondary
ChartGPs - ENC US4LA21M	AToN 2	33.54	177.4	Secondary (grouped)

Hydrographer Recommendations

The hydrographer defers the charting recommendation to MCD, Nautical Data Branch, Source Date Unit.

Cartographically-Rounded Depth (Affected Charts):

29ft (11351_1)

4 ¾fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 8.776 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Defer charting recommendation to MCD.

[Image file k:/finished_surveys/opr-k354-tc-05/sheetj_h11290/h11290/pss/screengrabs/removedoilplatform.jpg does not exist.]

1.15) MOI-EI-94-1 (platform)

Survey Summary

Survey Position: 29° 03' 02.884" N, 091° 45' 11.714" W

Least Depth: [None]

Timestamp: [None]

GP Dataset: ChartGPs - ENC US4LA21M

GP No.: AToN 1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is a chartGP representing a charted oil platform that was not observed in either the SSS or MBES data.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - ENC US4LA21M	AToN 1	0.00	000.0	Primary
ChartGPs - Digitized	2	48.52	262.0	Secondary (grouped)
h11290/da_sss_200/2005-175/da_175_050624033500	0001	55.92	256.2	Secondary (grouped)

Hydrographer Recommendations

The hydrographer defers the charting recommendation to MCD, Nautical Data Branch, Source Date Unit.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: CATOFP - 2:production platform

CONVIS - 1:visual conspicuous

INFORM - not observed in SSS

OBJNAM - MOI-EI-94-1

SORDAT - 19960910

Office Notes

Concur. Defer charting recommendation to MCD.

1.16) LL-EI-110-1 (platform)

Survey Summary

Survey Position: 29° 02' 29.202" N, 091° 42' 13.500" W

Least Depth: [None]

Timestamp: [None]

GP Dataset: ChartGPs - ENC US4LA21M

GP No.: AToN 4

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is an ENC chart GP (from US4LA21M). Although the feature is portrayed in the ENC, the feature, a charted oil platform, is not charted on chart 11351. No evidence of an oil platform was detected in either SSS or MBES data.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - ENC US4LA21M	AToN 4	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer defers the charting recommendation to MCD, Nautical Data Branch, Source Date Unit.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: CATOFP - 2:production platform

CONVIS - 1:visual conspicuous

OBJNAM - LL-EI-110-1

SORDAT - 19940719

Office Notes

Concur. Defer charting recommendation to MCD.

1.17) MOI-EI-93-9C (platform)

Survey Summary

Survey Position: 29° 05' 06.000" N, 091° 45' 31.000" W

Least Depth: [None]

Timestamp: [None]

GP Dataset: ChartGPs - ENC US4LA21M

GP No.: AToN 10

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is a chartGP representing a charted oil platform that was not observed in either the SSS or MBES data.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - ENC US4LA21M	AToN 10	0.00	000.0	Primary
h11290/r2_sss_100/2005-132/r2_132_050512132900	0001	49.42	279.8	Secondary (grouped)

Hydrographer Recommendations

The hydrographer defers the charting recommendation to MCD, Nautical Data Branch, Source Date Unit.

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: CATOFP - 2:production platform

CONVIS - 1:visual conspicuous

INFORM - observed in SSS?

OBJNAM - MOI-EI-93-9C

SORDAT - 19960910

Office Notes

Concur. Defer charting recommendation to MCD.

H11290 - UnCharted Features

Registry Number: H11290

State: Louisiana

Locality: Gulf of Mexico

Sub-locality: 26 NM SW of Point au Fer

Project Number: OPR-K354-TC-05

Survey Dates: 05/11/2005 - 07/13/2005

Charts Affected

Number	Version	Date	Scale
11351	39th Ed.	11/01/2004	1:80000
1116A	70th Ed.	08/01/2005	1:458596
11340	70th Ed.	08/01/2005	1:458596
411	50th Ed.	09/01/2005	1:2160000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	manifold	Obstruction	7.03 m	29° 04' 52.135" N	091° 45' 42.407" W	---
1.2	rectangular shadow	Obstruction	15.90 m	28° 59' 06.959" N	091° 48' 55.066" W	---
1.3	1m-high contact	Obstruction	10.62 m	29° 01' 59.073" N	091° 44' 47.605" W	---
1.4	feature in scour	Obstruction	6.43 m	29° 02' 45.999" N	091° 39' 31.415" W	---

1 - DR_UnCharted

1.1) manifold

Survey Summary

Survey Position: 29° 04' 52.135" N, 091° 45' 42.407" W

Least Depth: 7.03 m

Timestamp: 2005-131.15:33:55.962 (05/11/2005)

Survey Line: h11290 / tpe_r2_mb_0 / 2005-131 / r2mba05131_d03

Profile/Beam: 68054/137

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth over a an uncharted manifold-like object at the end of a charted pipeline (without a platform). The object was detected with 200% SSS (KLEIN 3000) and is covered with 100% MBES (a combination of RESON 8101 an RESON 8125).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_r2_mb_0/2005-131/r2mba05131_d03	68054/137	0.00	000.0	Primary
h11290/d2_sss_200/2005-188/d2_188_050707184100	0001	4.32	247.9	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707183500	0001	4.71	245.5	Secondary
h11290/r2_sss_100/2005-131/r2_131_050511152600	0001	4.75	249.7	Secondary
h11290/d2_sss_200/2005-131/d2_131_050511163300	0001	6.79	308.4	Secondary
h11290/d2_sss_200/2005-132/d2_132_050512170300	0001	14.95	221.5	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as a dangerous obstruction with a least depth of 23 feet at 29°04'52.135" N, 091°45'42.407" W.

Cartographically-Rounded Depth (Affected Charts):

23ft (11351_1)

3 ¾fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 7.029 m

WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Surrounding depths are 21-23Ft. This feature should not be charted as an obstn.

Feature Images

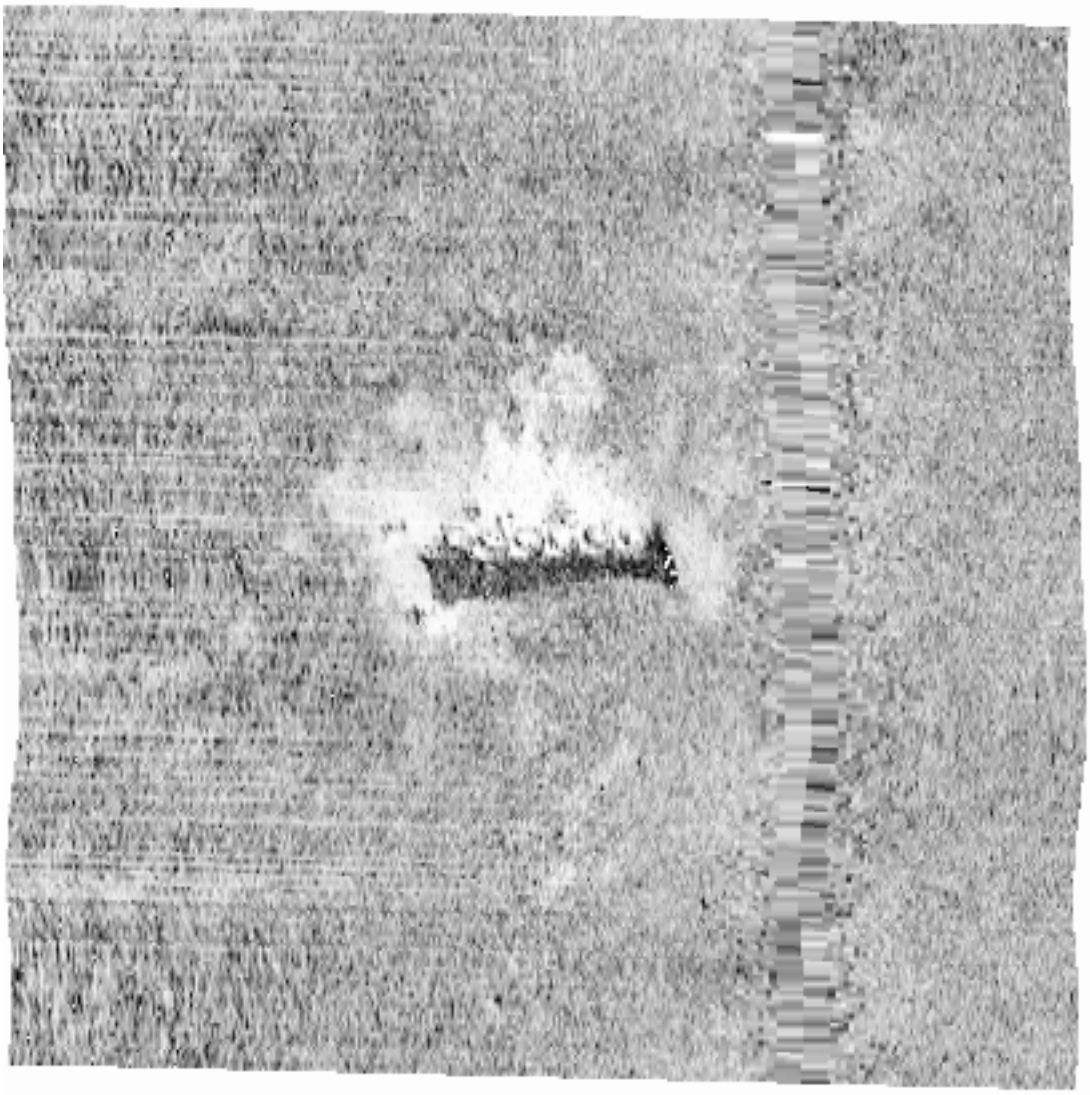


Figure 1.1.1

1.2) rectangular shadow

Survey Summary

Survey Position: 28° 59' 06.959" N, 091° 48' 55.066" W

Least Depth: 15.90 m

Timestamp: 2005-132.06:36:32.917 (05/12/2005)

Survey Line: h11290 / tpe_da_mb_0 / 2005-132 / damba05132_d09

Profile/Beam: 4107/28

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth over an uncharted man-made object that was detected with 200% SSS (KLEIN 5500) and is covered with 100% MBES (a combination of RESON 8101 and RESON 8111).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_da_mb_0/2005-132/damba05132_d09	4107/28	0.00	000.0	Primary
h11290/da_sss_200/2005-132/da_132_050512093400	0001	4.94	103.8	Secondary
h11290/da_sss_100/2005-132/da_132_050512063000	0001	10.90	258.6	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as a dangerous obstruction with a least depth of 52 feet at 28°59'06.959" N, 091°48'55.066" W.

Cartographically-Rounded Depth (Affected Charts):

52ft (11351_1)

8 ¾fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 15.898 m

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart obstn LD 52FT.

Feature Images

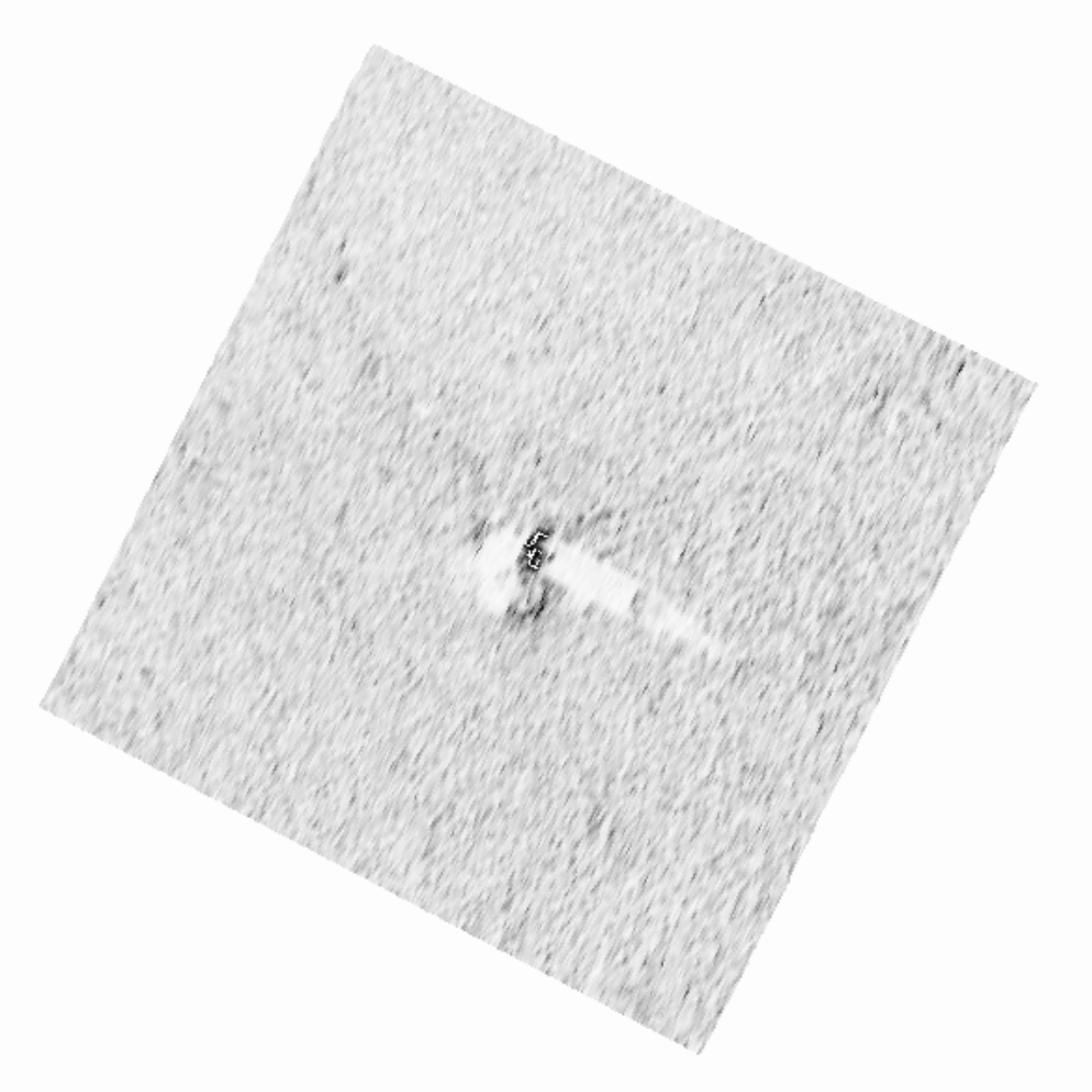


Figure 1.2.1

1.3) 1m-high contact

Survey Summary

Survey Position: 29° 01' 59.073" N, 091° 44' 47.605" W

Least Depth: 10.62 m

Timestamp: 2005-188.17:29:26.932 (07/07/2005)

Survey Line: h11290 / tpe_r2_mb_0 / 2005-188 / r2mba05188_d19

Profile/Beam: 528/110

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth on an uncharted obstruction that was detected with 200% SSS (KLEIN 5000) and covered with 100% MBES (a combination of RESON 8111 and RESON 8125).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_r2_mb_0/2005-188/r2mba05188_d19	528/110	0.00	000.0	Primary
h11290/da_sss_200/2005-128/da_128_050508123100	0001	0.76	242.2	Secondary
h11290/da_sss_100/2005-128/da_128_050508160800	0001	3.58	350.3	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as a dangerous obstruction with a least depth of 35 feet at 29°01'59.073" N, 091°44'47.605" W.

Cartographically-Rounded Depth (Affected Charts):

35ft (11351_1)

5 ¾fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 10.618 m

WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Surrounding depths are 34-36FT. Do not chart feature.

Feature Images

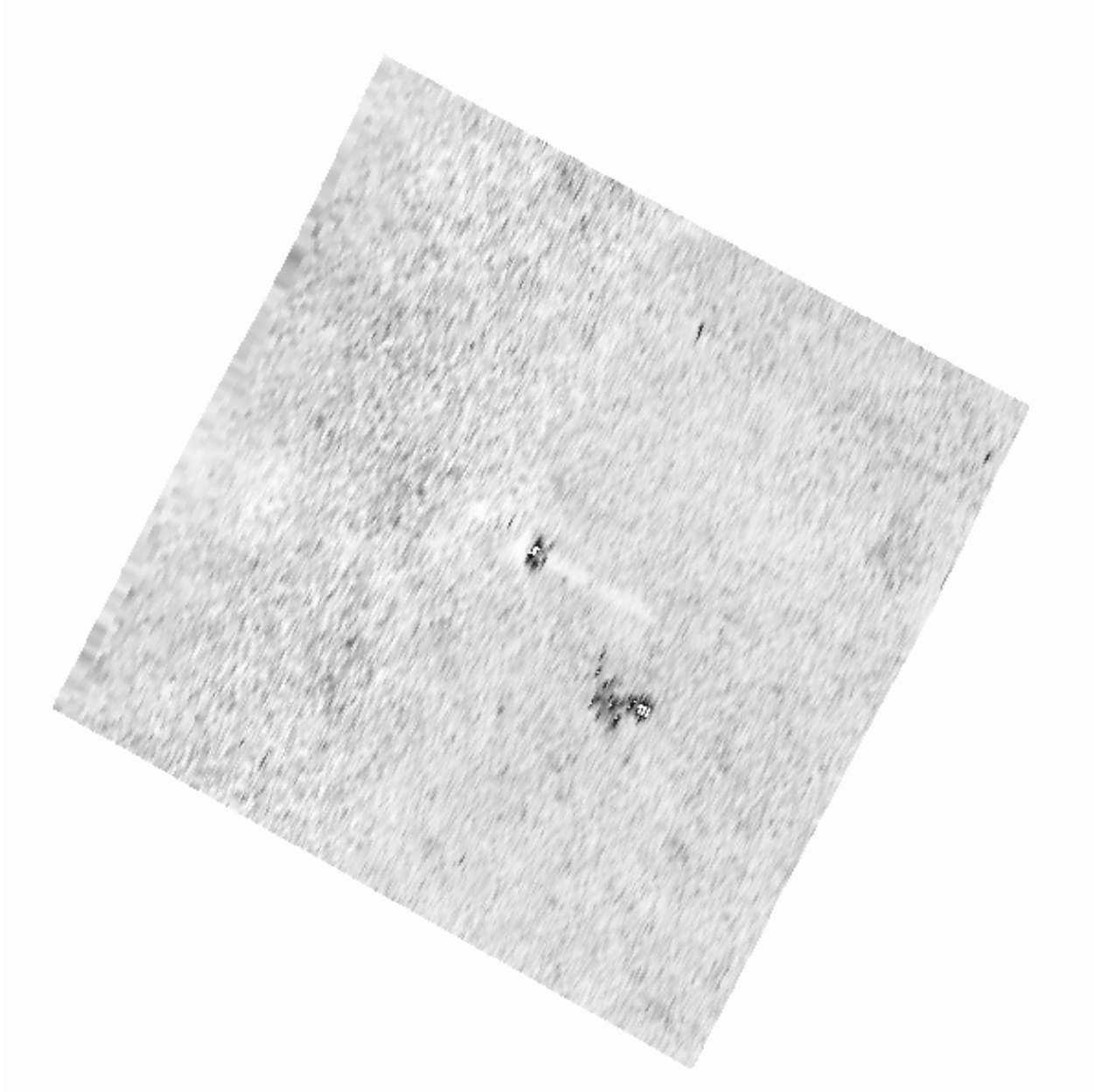


Figure 1.3.1

1.4) feature in scour

Survey Summary

Survey Position: 29° 02' 45.999" N, 091° 39' 31.415" W

Least Depth: 6.43 m

Timestamp: 2005-194.20:13:17.165 (07/13/2005)

Survey Line: h11290 / tpe_r2_mb_0 / 2005-194 / r2mba05194_d07

Profile/Beam: 8740/23

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth of an obstruction that was detected with SSS (KLEIN 3000) and covered with 200% MBES (100% each of RESON 8101 and RESEON 8125). The 1-m high obstruction, which is in a scour, is approximately 0.6 meters shoaler than the surrounding general bathymetry.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_r2_mb_0/2005-194/r2mba05194_d07	8740/23	0.00	000.0	Primary
h11290/d2_sss_200/2005-194/d2_194_050713232900	0001	0.88	351.8	Secondary
h11290/r2_sss_100/2005-194/r2_194_050713200100	0001	2.23	241.7	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as a dangerous obstruction with a least depth of 21 feet at 29°02'45.999" N, 091°39'31.415" W.

Cartographically-Rounded Depth (Affected Charts):

21ft (11351_1)

3 ½fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 6.426 m

WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Surrounding soundings are 21-23FT. Do not chart feature.

Feature Images

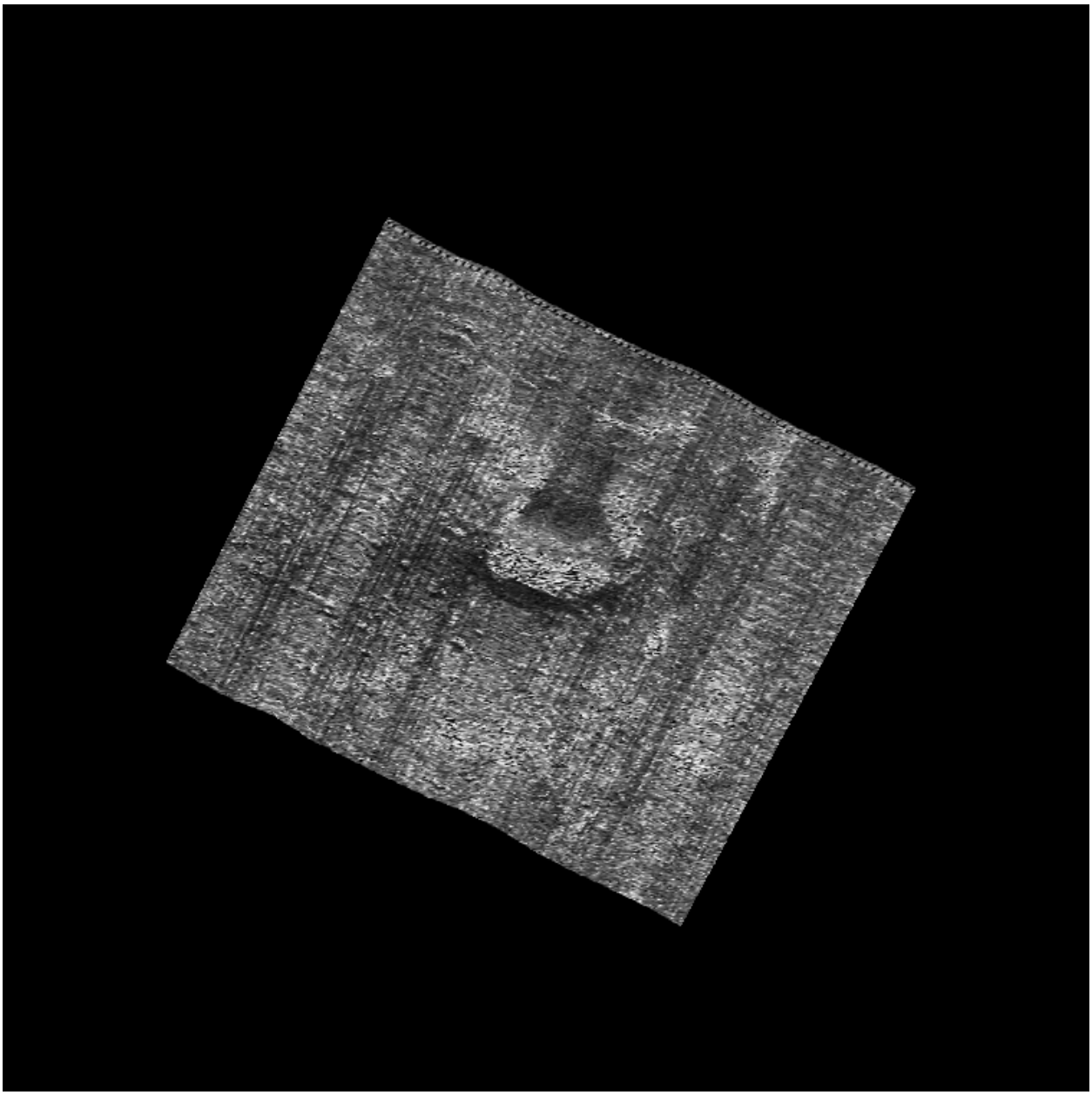
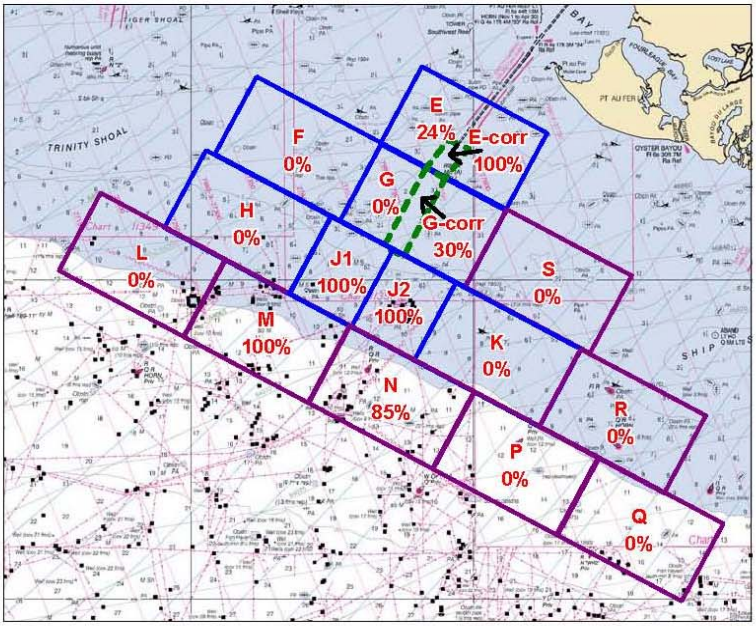


Figure 1.4.1 notice that color map is reversed from "normal"

APPENDIX III: FINAL PROGRESS SKETCH & SURVEY OUTLINE

Progress Sketch OPR-K354-TC-05
July, 2005



Project	Sheet_	H_num	HQ_Est_SNM	CumlPercCompPrev	CumlPercCompCu	SNM_CompCurN	CumSNMcomp
	K	H11291	108	0	0	0	0
	E	H11286	45	24	24	0	14
	F	H11287	108	0	0	0	0
	G	H11288	108	0	0	0	0
	H	H11289	108	0	0	0	0
	S		108	0	0	0	0
	R		108	0	0	0	0
	Q		108	0	0	0	0
	P		108	0	0	0	0
	N	H11468	108	5	85	2	92
	M	H11415	108	100	100	0	108
	L		108	0	0	0	0
	J1	H11290	54	85	100	9	54
	J2	H11475	54	50	100	11	54
0	E-corr	H11286	7	90	100	1	7
0	G-corr	H11288	17	0	30	0	5

Project	Month	LNM_Hydr	LNM_MB	SV_Casts	Bottom_Samp	AWOIS	Tide_Guage	DAS	DTime_equip	DTime_Weathe	D_Time_othe	Inport_
OPR-K35	JAN	1,445.00	1,445.00	130.00	1.00	0.00	0.00	20.00	9.00	69.00	85.00	55.00
OPR-K35	FEB	1,864.00	1,864.00	326.00	0.00	0.00	0.00	26.00	2.50	132.00	78.00	72.00
OPR-K35	MAR	2,164.80	2,164.80	216.00	26.00	3.00	0.00	19.00	42.00	59.50	96.60	159.00
OPR-K35	APR	2,429.00	2,429.00	226.00	29.00	0.00	0.00	20.00	8.25	37.00	71.00	151.00
OPR-K35	MAY	2,538.00	2,538.00	298.00	0.00	0.00	0.00	19.00	126.00	208.00	129.00	116.00
OPR-K35	JUN	857.00	857.00	124.00	0.00	0.00	0.00	14.00	0.00	60.00	0.00	360.00
OPR-K35	JUL	1,474.20	1,474.20	258.00	35.00	0.00	0.00	28.00	5.00	149.50	0.00	48.00

APPENDIX IV: TIDES AND WATER LEVELS

1) Field Tide Note (Section 5 of Project Instructions)

2) Approved Tides Request/Times of Hydrography

3) Final Tide Note

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : October 17, 2005

HYDROGRAPHIC BRANCH: Atlantic Hydrographic Branch
HYDROGRAPHIC PROJECT: OPR-K354-TC-2005
HYDROGRAPHIC SHEET: H11290

LOCALITY: 26 NM SW of Point au Fer, Gulf of Mexico, LA
TIME PERIOD: April 5 - July 29, 2005

TIDE STATION USED: Galveston Pleasure Pier, TX 877-1510
Lat. 29 17.1′ N Long. 094 47.3' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.563 meters

TIDE STATION USED: Eugene Island, LA 876-4311
Lat. 29 22.3' N Long. 091 23.1' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.555 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: WGM279, WGM280, WGM281, WGM282 & WGM289

Refer to attachments for zoning information.

Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time on the 1983-2001 National Tidal Datum Epoch (NTDE).

Note 2: The tide gauge at Eugene Island was destroyed before closing levels could be completed. A datum check was performed to establish Eugene Island's stability. Eugene Island was deemed stable and can be used for tidal correctors up until August 16th, 2005.

Note 3: Use tide data from the appropriate station with applicable zoning correctors for each zone according to the order in which they are listed in the Tidezone corrector file (*.ZDF). For example, tide station one (TS1) would be the first choice for an applicable zone followed by TS2, etc. when data are not available.

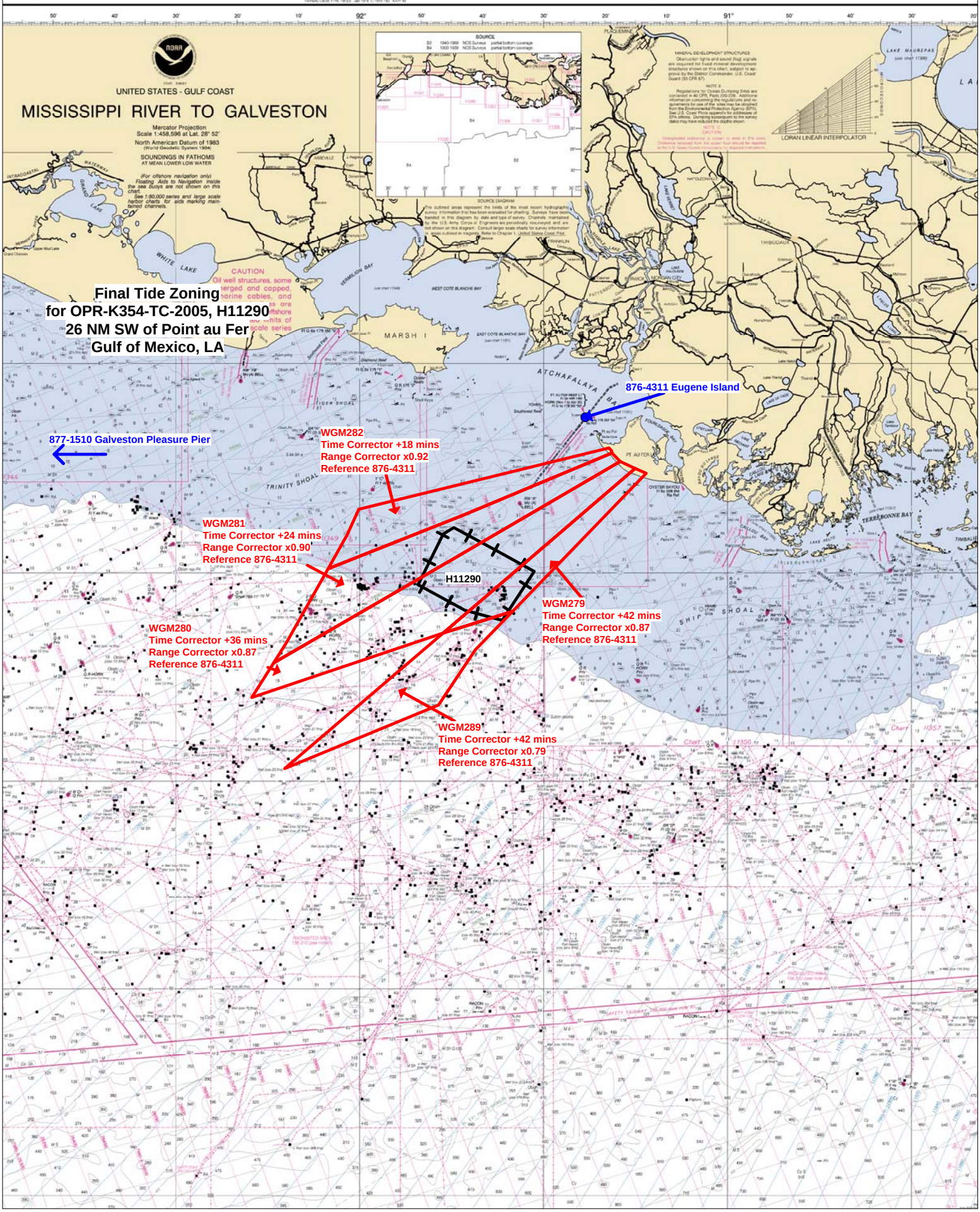
CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

Final tide zone node point locations for OPR-K354-TC-2005, H11290

Format: Tide Station (in recommended order of use)
Average Time Correction (in minutes)
Range Correction
Longitude in decimal degrees (negative value denotes Longitude West),
Latitude in decimal degrees

	Tide Station Order	AVG Time Correction	Range Correction
Zone WGM279	876-4311	+42	0.87
-91.219355 29.237909	877-1510	+18	0.83
-91.24945 29.249642			
-91.771676 28.856183			
-91.582929 28.90797			
-91.219355 29.237909			
Zone WGM280	876-4311	+36	0.87
-91.24945 29.249642	877-1510	+6	0.83
-91.290243 29.266244			
-91.359246 29.230886			
-91.749565 29.030883			
-92.233468 28.784646			
-92.292808 28.701542			
-91.771676 28.856183			
-91.24945 29.249642			
Zone WGM281	876-4311	+24	0.90
-91.290243 29.266244	877-1510	0	0.86
-91.312592 29.286417			
-91.713292 29.139324			
-92.085318 29.009956			
-92.198364 28.833418			
-92.233468 28.784646			
-91.749565 29.030883			
-91.359246 29.230886			
-91.290243 29.266244			
Zone WGM282	876-4311	+18	0.92
-91.312592 29.286417	877-1510	-12	0.88
-91.313407 29.291703			
-91.320554 29.298432			
-92.001586 29.152267			
-92.033855 29.090323			
-92.085318 29.009956			
-91.713292 29.139324			
-91.312592 29.286417			

Zone WGM289	876-4311	+42	0.79
-91.582929 28.90797	877-1510	+18	0.76
-91.771676 28.856183			
-92.203495 28.53084			
-91.784867 28.683346			
-91.684155 28.816108			
-91.582929 28.90797			


UNITED STATES - GULF COAST
MISSISSIPPI RIVER TO GALVESTON
Mercator Projection
Scale 1:458,596 at Lat. 28° 52'
North American Datum of 1983
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER
Final Tide Zoning
for OPR-K354-TC-2005, H11290
26 NM SW of Point au Fer
Gulf of Mexico, LA
876-4311 Eugene Island
877-1510 Galveston Pleasure Pier
WGM282
Time Corrector +18 mins
Range Corrector x0.92
Reference 876-4311
WGM281
Time Corrector +24 mins
Range Corrector x0.90
Reference 876-4311
H11290
WGM279
Time Corrector +42 mins
Range Corrector x0.87
Reference 876-4311
WGM280
Time Corrector +36 mins
Range Corrector x0.87
Reference 876-4311
WGM289
Time Corrector +42 mins
Range Corrector x0.79
Reference 876-4311
ATCHAFALAYA BAY
TRINITY SHOAL
MARSH I
WHITE LAKE
VERMILION BAY
WEST COTE BLANCHE BAY
EAST COTE BLANCHE BAY
TERREBONNE BAY
SHIP SHOAL
LORAN LINEAR INTERPOLATOR

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : October 17, 2005

HYDROGRAPHIC BRANCH: Atlantic Hydrographic Branch
HYDROGRAPHIC PROJECT: OPR-X354-TC-2005
HYDROGRAPHIC SHEET: H11290

LOCALITY: 26 NM SW of Point au Fer, Gulf of Mexico, LA
TIME PERIOD: April 5 - July 29, 2005

TIDE STATION USED: Galveston Pleasure Pier, TX 877-1510
Lat. 29 17.1' N Long. 094 47.3' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.563 meters

TIDE STATION USED: Eugene Island, LA 876-4311
Lat. 29 22.3' N Long. 091 23.1' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.555 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: WGM279, WGM280, WGM281, WGM282 & WGM289

Refer to attachments for zoning information.

Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time on the 1983-2001 National Tidal Datum Epoch (NTDE).

Note 2: The tide gauge at Eugene Island was destroyed before closing levels could be completed. A datum check was performed to establish Eugene Island's stability. Eugene Island was deemed stable and can be used for tidal correctors up until August 16th, 2005.

Note 3: Use tide data from the appropriate station with applicable zoning correctors for each zone according to the order in which they are listed in the Tidezone corrector file (*.ZDF). For example, tide station one (TS1) would be the first choice for an applicable zone followed by TS2, etc. when data are not available.

For

CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

Subject: OPR-K354-TC-05 H11290 Request for Approved Water Levels
Date: Tue, 04 Oct 2005 08:43:01 -0400
From: gene_parker <castle.e.parker@noaa.gov>
Organization: NOAA / Atlantic Hydrographic Branch
To: SmoothTides <Smooth.Tides@noaa.gov>
CC: James M Crocker <James.M.Crocker@noaa.gov>,
Edward Owens <Edward.Owens@noaa.gov>,
Nicholas A Forfinski <Nicholas.A.Forfinski@noaa.gov>

Good Day, Please reference the attached zip file containing information related to the request for Approved Water Levels for NOAA Time Charter project OPR-K354-TC-05, survey H11290. If there are any questions related to this request please respond by phone (757-441-6413) or email.

Thank you for your assistance with this matter.

Regards, Gene Parker

Name: OPR-K354-TC-05_H11290_RequestApprovedTides.zip
OPR-K354-TC-05_H11290_RequestApprovedTides.zip Type: Zip Compressed Data
(application/x-zip-compressed)
Encoding: base64

Castle Eugene Parker <castle.e.parker@noaa.gov>
Physical Scientist
NOAA NOS Office of Coast Survey
Atlantic Hydrographic Branch

Castle Eugene Parker
Physical Scientist <castle.e.parker@noaa.gov>
NOAA NOS Office of Coast Survey
Atlantic Hydrographic Branch
439 West York Street Fax: 757-441-6601
Norfolk Work: 757-441-6413
Virginia
23510
Additional Information:
Last Name Parker
First NameCastle Eugene
Version 2.1

APPENDIX V: SUPPLEMENTAL SURVEY RECORDS & CORRESPONDENCES

V.1. COAST PILOT REPORT, NOAA FORM 77-6

There are no recommended changes to the Coast Pilot.

V.2. BOTTOM SAMPLE, NOAA FORM 75-44

Twenty bottom samples were acquired (see section D.2), but the samples were not retained.

V.3. NONFLOATING AIDS OR LANDMARKS FOR CHARTS, NOAA FORM 76-40

No non-floating aids or landmarks were explicitly positioned during this survey; however, the 14 charted oil platforms that are located within the survey limits are represented in the PSS as either primary SSS or primary MBES features. (See section D.2, Additional Results.)

Subject: OPR-K354-TC-05 H11290 Request for Approved Water Levels
Date: Tue, 04 Oct 2005 08:43:01 -0400
From: gene_parker <castle.e.parker@noaa.gov>
Organization: NOAA / Atlantic Hydrographic Branch
To: SmoothTides <Smooth.Tides@noaa.gov>
CC: James M Crocker <James.M.Crocker@noaa.gov>,
Edward Owens <Edward.Owens@noaa.gov>,
Nicholas A Forfinski <Nicholas.A.Forfinski@noaa.gov>

Good Day, Please reference the attached zip file containing information related to the request for Approved Water Levels for NOAA Time Charter project OPR-K354-TC-05, survey H11290. If there are any questions related to this request please respond by phone (757-441-6413) or email.

Thank you for your assistance with this matter.

Regards, Gene Parker

Name: OPR-K354-TC-05_H11290_RequestApprovedTides.zip
OPR-K354-TC-05_H11290_RequestApprovedTides.zip Type: Zip Compressed Data
(application/x-zip-compressed)
Encoding: base64

Castle Eugene Parker <castle.e.parker@noaa.gov>
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439 West York Street Fax: 757-441-6601
Norfolk Work: 757-441-6413
Virginia
23510
Additional Information:
Last Name Parker
First NameCastle Eugene
Version 2.1

Subject: H11290 DtoNs and exposed pipelines
Date: Thu, 27 Apr 2006 17:20:47 -0400
From: nick forfinski <nicholas.a.forfinski@noaa.gov>
To: Tim Osborn <Tim.Osborn@noaa.gov>
CC: Castle E Parker <Castle.E.Parker@noaa.gov>,
Edward Owens <Edward.Owens@noaa.gov>,
Tod Schattgen <Tod.Schattgen@noaa.gov>

Hello from Norfolk. I work at the hydrographic branch here, and I've been processing one of the time charter surveys from the Gulf of Mexico this last year (H11290). For your information and reading pleasure, attached is a report detailing the three DtoNs that have been submitted so far and 11 other features you might possibly be interested in. Those 11 other features appear to be exposed pipelines/pipeline-related stuff. Most of the 11 are considered cartographically insignificant and will not be included in the DR, but we wanted to let you know about them anyway, just in case any of the oil companies might be interested. If there're any questions, please send 'em this way.

-Nick

H11290_NavManager_Features.zip

Name: H11290_NavManager_Features.zip
Type: Zip Compressed Data (application/x-zip-compressed)
Encoding: base64
Download Status: Not downloaded with message

Nav Manager Notification Items

Registry Number: H11290

State: Louisiana

Locality: Gulf of Mexico

Sub-locality: 26 NM SW of Point au Fer

Project Number: OPR-K354-TC-05

Survey Dates: 04/25/2005 - 07/21/2005

Charts Affected

Number	Version	Date	Scale
11351	39th Ed.	11/01/2004	1:80000
1116A	70th Ed.	08/01/2005	1:458596
11340	70th Ed.	08/01/2005	1:458596
411	50th Ed.	09/01/2005	1:2160000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	insig exposed pipline	Obstruction	8.54 m	029° 03' 48.300" N	91° 45' 21.904" W	---
1.2	sig exposed pipeline (1 of 3 clustered exposures)	Obstruction	5.09 m	029° 04' 35.000" N	91° 45' 31.920" W	---
1.3	sig pipe-like object jutting up from bottom	Obstruction	6.94 m	029° 03' 35.564" N	91° 45' 15.826" W	---
1.4	insig exposed pipeline (1 of 3 clustered exposures)	Obstruction	7.14 m	029° 04' 35.289" N	91° 45' 32.328" W	---
1.5	insig exposed pipeline	Obstruction	8.44 m	029° 03' 32.660" N	91° 45' 12.978" W	---
1.6	insig exposed pipeline	Obstruction	8.13 m	029° 03' 52.042" N	91° 45' 25.225" W	---
1.7	insig exposed pipeline	Obstruction	8.23 m	029° 03' 43.771" N	91° 45' 19.299" W	---
1.8	insig exposed pipeline	Obstruction	5.74 m	029° 04' 06.987" N	91° 42' 11.774" W	---
1.9	insig exposed pipeline (1 of 3 clustered exposures)	Obstruction	6.36 m	029° 04' 34.313" N	91° 45' 31.875" W	---
1.10	insig exposed pipeline	Obstruction	[None]	029° 03' 46.680" N	91° 45' 20.380" W	---
1.11	insig exposed pipeline	Obstruction	[None]	029° 03' 44.486" N	91° 45' 18.670" W	---
1.12	DTON - uncharted frame structure	Obstruction	12.46 m	029° 01' 16.774" N	91° 47' 39.780" W	---
1.13	DTON - small debris pile	Obstruction	9.11 m	029° 02' 50.464" N	91° 46' 03.918" W	---
1.14	DTON - unidentified obstruction	Obstruction	7.66 m	029° 03' 16.401" N	91° 44' 48.535" W	---

1 - NavManager

1.1) insig exposed pipline

Survey Summary

Survey Position: 029° 03' 48.300" N, 91° 45' 21.904" W

Least Depth: 8.54 m

Timestamp: 2005-125.18:11:55.716 (05/05/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-125 / d2mba05125_d05

Profile/Beam: 75740/81

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is what appears to be an exposed pipeline near the position of the intersection of two charted pipelines. The feature is one of seven exposed pipeline features (the question marks in the third image on the following page) in the general vicinity.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-125/d2mba05125_d05	75740/81	0.00	000.0	Primary
h11290/r2_sss_100/2005-126/r2_126_050506215000	0003	0.46	118.7	Secondary
h11290/r2_sss_100/2005-125/r2_125_050505211000	0003	1.21	249.5	Secondary
h11290/d2_sss_200/2005-125/d2_125_050505180700	0002	1.97	158.0	Secondary

Hydrographer Recommendations

The hydrographer does not recommend any cartographic action but does recommend notifying the regional nav manager.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

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

VALSOU - 8.541 m

WATLEV - 3:always under water/submerged

Feature Images

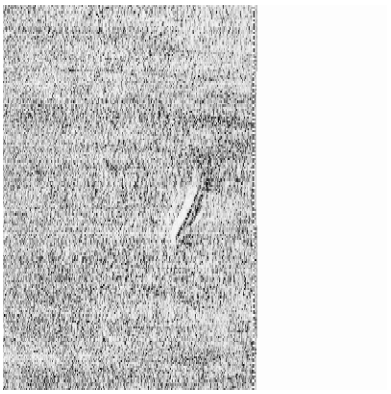

Figure 1.1.1

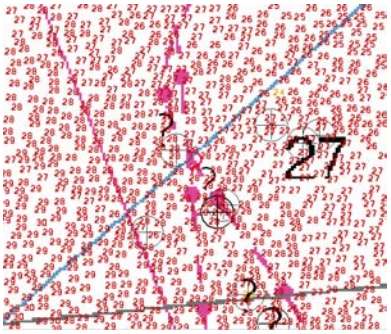

Figure 1.1.2

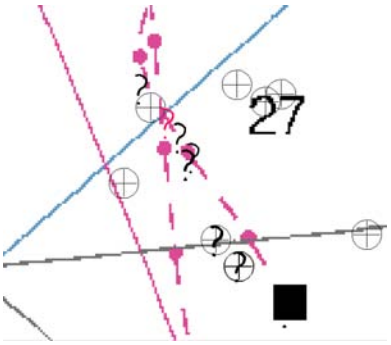

Figure 1.1.3

1.2) sig exposed pipeline (1 of 3 clustered exposures)

Survey Summary

Survey Position: 029° 04' 35.000" N, 91° 45' 31.920" W

Least Depth: 5.09 m

Timestamp: 2005-188.18:24:51.617 (07/07/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-188 / d2mba05188_d28

Profile/Beam: 536/31

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth over an uncharted obstruction (most likely an exposed cable/pipeline) detected with 200% SSS (KLEIN 3000) and developed with 100% MBES (RESON 8101). The feature is the shoalest of three clustered similar items and is located approximately 90 meters from the center of a charted oil platform.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-188/d2mba05188_d28	536/31	0.00	000.0	Primary
h11290/r2_sss_100/2005-130/r2_130_050510184700	0001	0.89	026.5	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707183000	0001	1.53	351.1	Secondary
h11290/d2_sss_200/2005-130/d2_130_050510192900	0001	2.37	294.1	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as an obstruction as per the least depth and position of the feature.

Cartographically-Rounded Depth (Affected Charts):

16ft (11351_1)

2 ¾fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

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

VALSOU - 5.087 m

WATLEV - 3:always under water/submerged

Feature Images

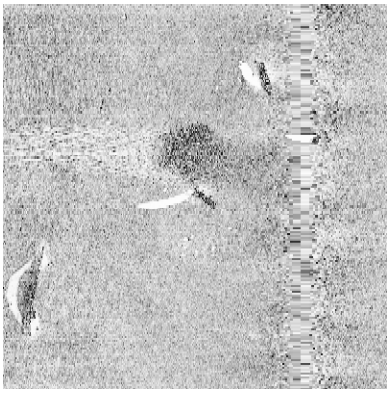

Figure 1.2.1

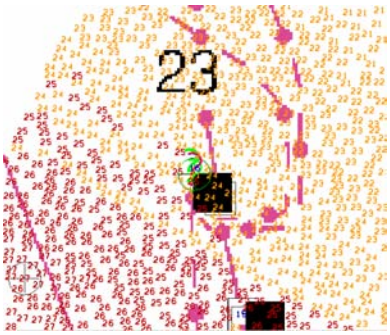

Figure 1.2.2

1.3) sig pipe-like object jutting up from bottom

Survey Summary

Survey Position: 029° 03' 35.564" N, 91° 45' 15.826" W

Least Depth: 6.94 m

Timestamp: 2005-188.19:25:12.341 (07/07/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-188 / d2mba05188_d36

Profile/Beam: 505/58

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth on an obstruction that appears to be an exposed cable/pipeline. The feature was detected with 200% SSS data (KLEIN 3000) and developed with 100% MBES data (RESON 8101). The feature is one of seven exposed pipeline features (the question marks in the third image on the following page) in the general vicinity.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-188/d2mba05188_d36	505/58	0.00	000.0	Primary
h11290/d2_sss_200/2005-188/d2_188_050707192400	0001	0.97	244.6	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707193000	0001	1.44	037.4	Secondary
h11290/d2_sss_200/2005-137/d2_137_050517193200	0001	2.10	294.3	Secondary
h11290/r2_sss_100/2005-137/r2_137_050517140400	0001	4.47	321.1	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as an obstruction as per the least depth and position of the feature.

Cartographically-Rounded Depth (Affected Charts):

23ft (11351_1)

3 ¾fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 6.939 m

WATLEV - 3:always under water/submerged

Feature Images

Figure 1.3.1

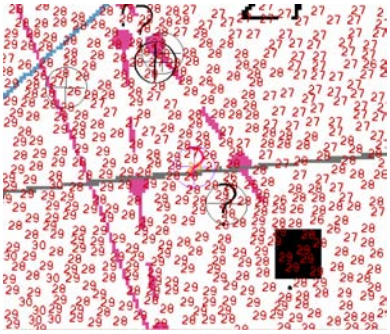

Figure 1.3.2

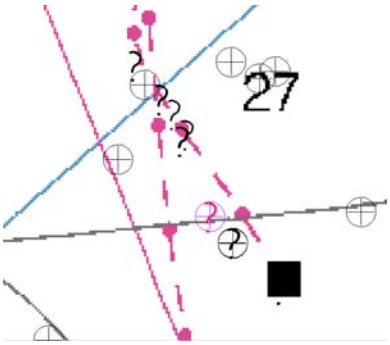

Figure 1.3.3

1.4) insig exposed pipeline (1 of 3 clustered exposures)

Survey Summary

Survey Position: 029° 04' 35.289" N, 91° 45' 32.328" W

Least Depth: 7.14 m

Timestamp: 2005-130.18:53:04.839 (05/10/2005)

Survey Line: h11290 / tpe_r2_mb_0 / 2005-130 / r2mba05130_d07

Profile/Beam: 66550/24

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth over the 2nd tallest feature in a group of three features that are relatively close to each other (within 33 meters). The feature appears to be an exposed pipeline.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_r2_mb_0/2005-130/r2mba05130_d07	66550/24	0.00	000.0	Primary
h11290/r2_sss_100/2005-130/r2_130_050510184700	0002	0.33	297.1	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707183000	0002	1.25	244.4	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707182300	0001	3.44	207.0	Secondary
h11290/d2_sss_200/2005-131/d2_131_050511160300	0001	5.33	249.9	Secondary

Hydrographer Recommendations

The hydrographer does not recommend any cartographic action but does recommend notifying the regional nav manager.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 7.142 m

Feature Images

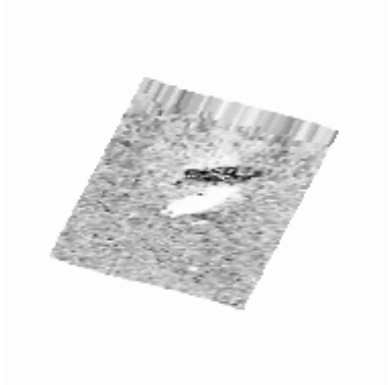

Figure 1.4.1

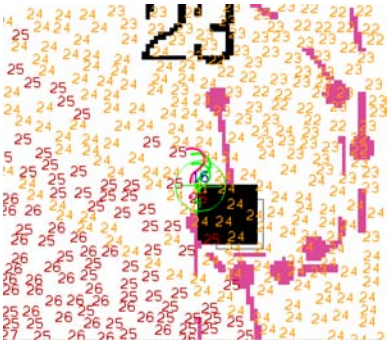

Figure 1.4.2

1.5) insig exposed pipeline

Survey Summary

Survey Position: 029° 03' 32.660" N, 91° 45' 12.978" W

Least Depth: 8.44 m

Timestamp: 2005-115.13:23:13.498 (04/25/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-115 / d2mba05115_d01

Profile/Beam: 26953/91

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is what looks to be an exposed pipeline approximately 75 meters from a charted pipelines. The feature is one of seven exposed pipeline features (the question marks in the third image on the following page) in the general vicinity.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-115/d2mba05115_d01	26953/91	0.00	000.0	Primary
h11290/d2_sss_200/2005-188/d2_188_050707193600	0001	0.48	210.2	Secondary
h11290/tpe_r2_mb_0/2005-210/r2mba05210_d01	190/168	0.65	348.1	Secondary
h11290/tpe_r2_mb_0/2005-209/r2mba05209_d12	432/82	0.82	032.3	Secondary
h11290/d2_sss_200/2005-115/d2_115_050425130000	0001	1.07	235.6	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707194300	0001	1.35	286.1	Secondary
h11290/da_sss_100/2005-174/da_174_050623083500	0001	3.43	257.7	Secondary

Hydrographer Recommendations

The hydrographer does not recommend any cartographic action but does recommend notifying the regional nav manager.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 8.438 m

Feature Images

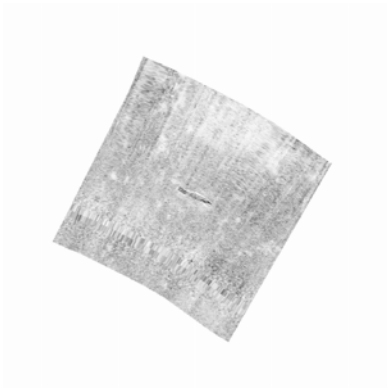

Figure 1.5.1

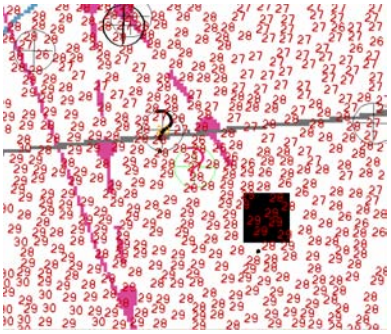

Figure 1.5.2

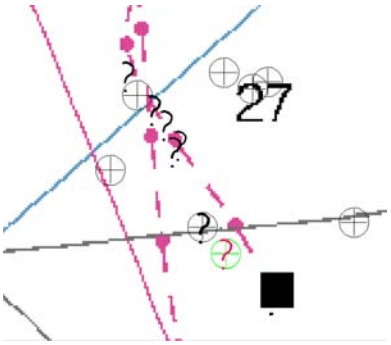

Figure 1.5.3

1.6) insig exposed pipeline

Survey Summary

Survey Position: 029° 03' 52.042" N, 91° 45' 25.225" W

Least Depth: 8.13 m

Timestamp: 2005-125.21:44:42.005 (05/05/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-125 / d2mba05125_d08

Profile/Beam: 9542/92

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is what looks to be an exposed pipeline near the intersection of two charted pipelines. The feature is one of seven exposed pipeline features (the question marks in the third image on the following page) in the general vicinity.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-125/d2mba05125_d08	9542/92	0.00	000.0	Primary
h11290/d2_sss_200/2005-125/d2_125_050505213500	0002	0.69	180.4	Secondary
h11290/r2_sss_100/2005-125/r2_125_050505211000	0002	1.74	223.2	Secondary

Hydrographer Recommendations

The hydrographer does not recommend any cartographic action but does recommend notifying the regional nav manager.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 8.127 m

Feature Images

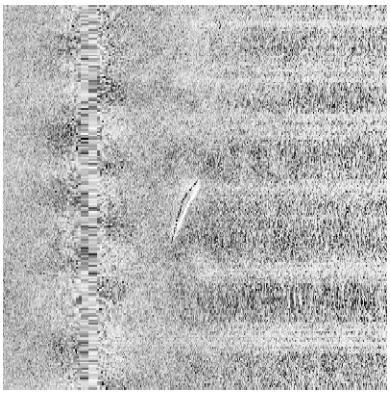

Figure 1.6.1

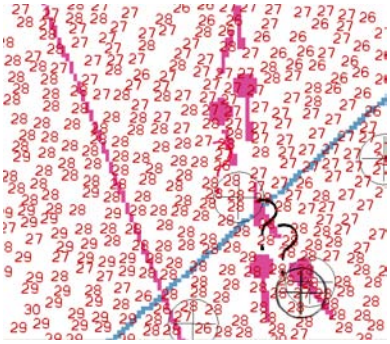

Figure 1.6.2

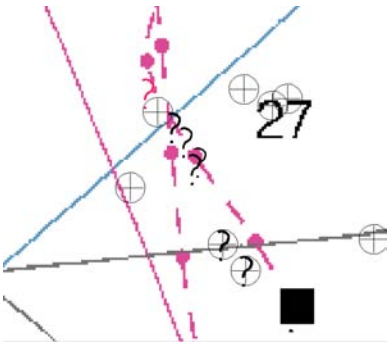

Figure 1.6.3

1.7) insig exposed pipeline

Survey Summary

Survey Position: 029° 03' 43.771" N, 91° 45' 19.299" W

Least Depth: 8.23 m

Timestamp: 2005-115.13:49:48.822 (04/25/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-115 / d2mba05115_d02

Profile/Beam: 10879/75

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is what looks to be an exposed pipeline near the intersection of two charted pipelines. The feature is one of seven exposed pipeline features (the question marks in the third image on the following page) in the general vicinity.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-115/d2mba05115_d02	10879/75	0.00	000.0	Primary
h11290/d2_sss_200/2005-115/d2_115_050425133800	0001	1.59	123.0	Secondary
h11290/r2_sss_100/2005-126/r2_126_050506182000	0001	2.58	085.7	Secondary

Hydrographer Recommendations

The hydrographer does not recommend any cartographic action but does recommend notifying the regional nav manager.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 8.235 m

WATLEV - 3:always under water/submerged

Feature Images

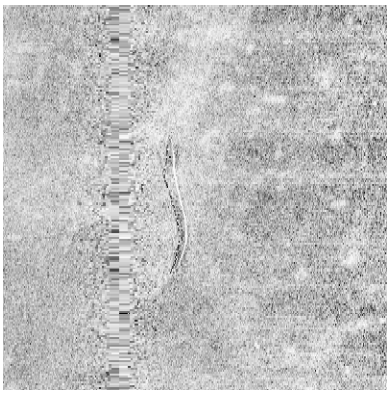

Figure 1.7.1

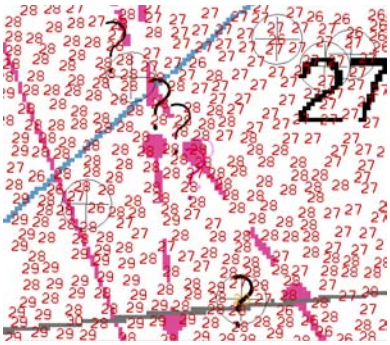

Figure 1.7.2

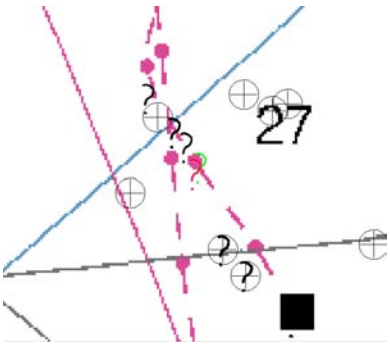

Figure 1.7.3

1.8) insig exposed pipeline

Survey Summary

Survey Position: 029° 04' 06.987" N, 91° 42' 11.774" W

Least Depth: 5.74 m

Timestamp: 2005-202.19:15:11.952 (07/21/2005)

Survey Line: h11290 / tpe_r2_mb_0 / 2005-202 / r2mba05202_d05

Profile/Beam: 40233/80

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth over a pipeline/cable extending from a charted platform approximately 20 meters away.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_r2_mb_0/2005-202/r2mba05202_d05	40233/80	0.00	000.0	Primary
h11290/r2_sss_100/2005-202/r2_202_050721185800	0003	5.17	211.4	Secondary

Hydrographer Recommendations

The hydrographer does not recommend any cartographic action but does recommend notifying the regional nav manager.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 5.743 m

Feature Images

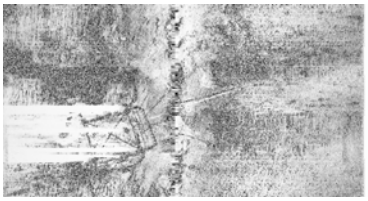

Figure 1.8.1

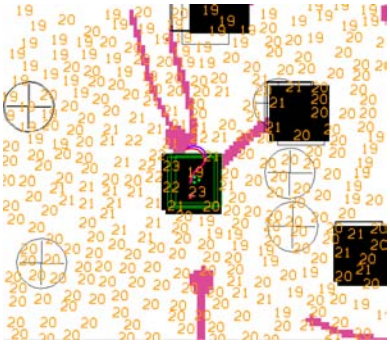

Figure 1.8.2

1.9) insig exposed pipeline (1 of 3 clustered exposures)

Survey Summary

Survey Position: 029° 04' 34.313" N, 91° 45' 31.875" W

Least Depth: 6.36 m

Timestamp: 2005-188.18:31:20.555 (07/07/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-188 / d2mba05188_d29

Profile/Beam: 551/8

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth over the 2nd tallest feature in a group of three features that are relatively close to each other (within 33 meters). The feature appears to be an exposed pipeline.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-188/d2mba05188_d29	551/8	0.00	000.0	Primary
h11290/d2_sss_200/2005-130/d2_130_050510192900	0002	0.65	188.8	Secondary

Hydrographer Recommendations

The hydrographer does not recommend any cartographic action but does recommend notifying the regional nav manager.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 6.360 m

Feature Images

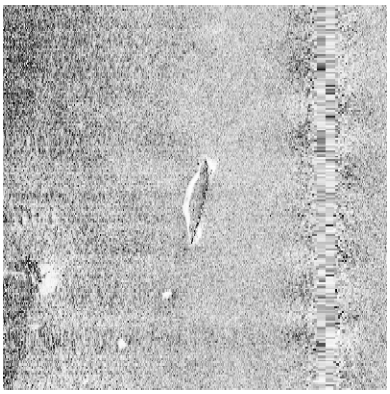

Figure 1.9.1

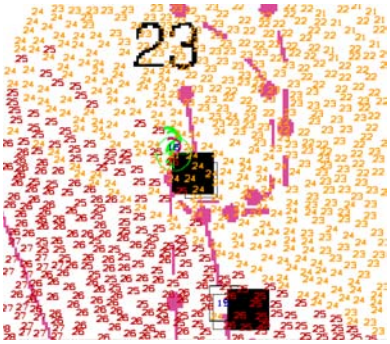

Figure 1.9.2

1.10) insig exposed pipeline

Survey Summary

Survey Position: 029° 03' 46.680" N, 91° 45' 20.380" W

Least Depth: [None]

Timestamp: 2005-126.21:56:16 (05/06/2005)

Survey Line: h11290 / r2_sss_100 / 2005-126 / r2_126_050506215000

Contact/Point: 0002/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is what looks to be an exposed pipeline near the intersection of two charted pipelines. The navigationally insignificant feature was detected with 200% SSS data (KLEIN 3000) but is not discernable in the MBES data (RESON 8101) covering the area. The feature is one of seven exposed pipeline features (the question marks in the third image on the following page) in the general vicinity.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/r2_sss_100/2005-126/r2_126_050506215000	0002	0.00	000.0	Primary
h11290/d2_sss_200/2005-125/d2_125_050505180700	0001	1.42	170.5	Secondary

Hydrographer Recommendations

The hydrographer does not recommend any cartographic action but does recommend notifying the regional nav manager.

S-57 Data

[None]

Feature Images

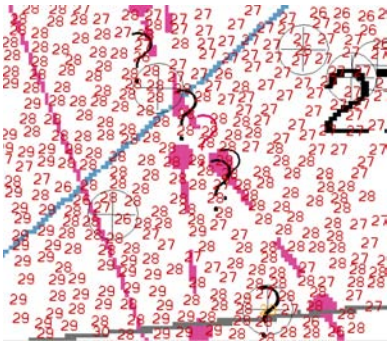

Figure 1.10.1

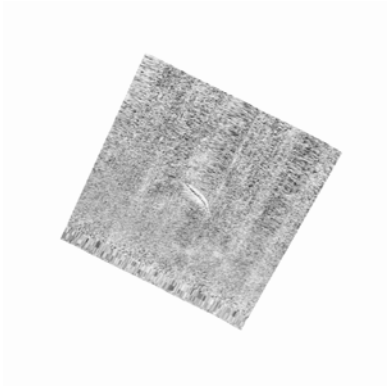

Figure 1.10.2

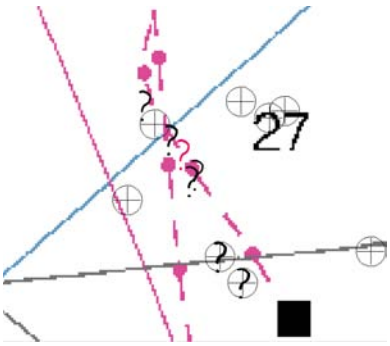

Figure 1.10.3

1.11) insig exposed pipeline

Survey Summary

Survey Position: 029° 03' 44.486" N, 91° 45' 18.670" W

Least Depth: [None]

Timestamp: 2005-126.21:55:52 (05/06/2005)

Survey Line: h11290 / r2_sss_100 / 2005-126 / r2_126_050506215000

Contact/Point: 0001/1

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is what looks to be an exposed pipeline near the intersection of two charted pipelines. The navigationally insignificant feature was detected with 200% SSS data (KLEIN 3000) but is not discernable in the MBES data (RESON 8101) covering the area. The feature is one of seven exposed pipeline features (the question marks in the third image on the following page) in the general vicinity.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/r2_sss_100/2005-126/r2_126_050506215000	0001	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer does not recommend any cartographic action but does recommend notifying the regional nav manager.

S-57 Data

[None]

Feature Images

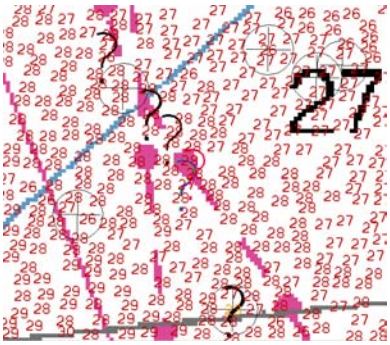

Figure 1.11.1

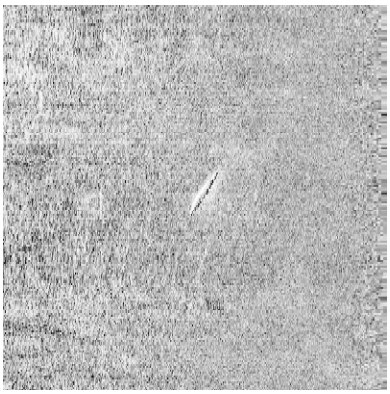

Figure 1.11.2

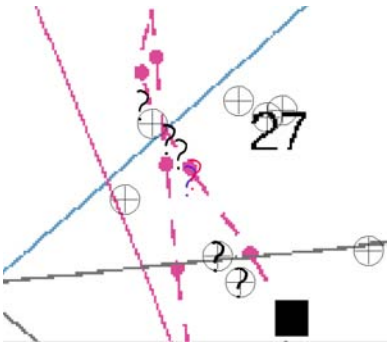

Figure 1.11.3

1.12) DTON - uncharted frame structure

DANGER TO NAVIGATION

Survey Summary

Survey Position: 029° 01' 16.774" N, 91° 47' 39.780" W

Least Depth: 12.46 m

Timestamp: 2005-188.16:56:49.093 (07/07/2005)

Survey Line: h11290 / tpe_d2_mb_0 / 2005-188 / d2mba05188_d19

Profile/Beam: 437/26

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth on a 1.8-meter high, rectangular structure that was located with 200% SSS (KLEIN 3000) and is covered with 100% MBES (RESON 8101). ***This DtoN was submitted to MCD on 04/20/06.***

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_d2_mb_0/2005-188/d2mba05188_d19	437/26	0.00	000.0	Primary
h11290/d2_sss_200/2005-188/d2_188_050707165500	0002	0.73	220.2	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707165500	0001	1.76	248.0	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707170100	0001	3.31	182.4	Secondary
h11290/da_sss_100/2005-132/da_132_050512043500	0001	10.19	278.4	Secondary
h11290/da_sss_200/2005-132/da_132_050512071700	0001	11.16	289.1	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as an obstruction as per the feature's position and least depth.

Cartographically-Rounded Depth (Affected Charts):

41ft (11351_1)

6 ¾fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 1:depth known

TECSOU - 3:found by multi-beam

VALSOU - 12.460 m

WATLEV - 3:always under water/submerged

Feature Images

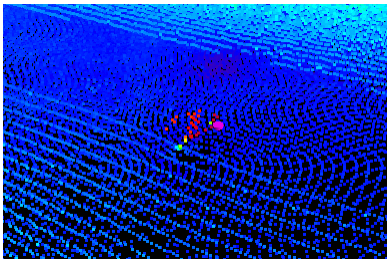

Figure 1.12.1

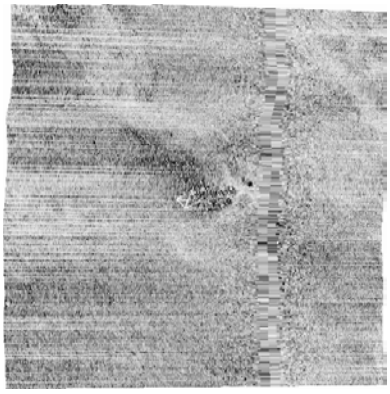

Figure 1.12.2

1.13) DTON - small debris pile

DANGER TO NAVIGATION

Survey Summary

Survey Position: 029° 02' 50.464" N, 91° 46' 03.918" W

Least Depth: 9.11 m

Timestamp: 2005-131.09:39:20.464 (05/11/2005)

Survey Line: h11290 / tpe_da_mb_0 / 2005-131 / damba05131b_d14

Profile/Beam: 39695/97

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the least depth over an uncharted 1.8-meter high obstruction detected with 200% SSS (KLEIN 5000) and covered with 100% MBES (a combination of RESON 8111 and RESON 8101). ***This DtoN was submitted to MCD on 04/20/06.***

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_da_mb_0/2005-131/damba05131b_d14	39695/97	0.00	000.0	Primary
h11290/d2_sss_200/2005-188/d2_188_050707174400	0001	1.58	214.9	Secondary
h11290/da_sss_100/2005-131/da_131_050511092900	0001	4.24	289.3	Secondary
h11290/d2_sss_200/2005-188/d2_188_050707173800	0001	4.41	276.8	Secondary
h11290/da_sss_200/2005-131/da_131_050511061400	0001	5.99	228.6	Secondary

Hydrographer Recommendations

The hydrographer recommends charting the feature as an obstruction as per the feature's position and least depth.

Cartographically-Rounded Depth (Affected Charts):

30ft (11351_1)

5fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 1:depth known

TECSOU - 3:found by multi-beam

VALSOU - 9.113 m

WATLEV - 3:always under water/submerged

Feature Images

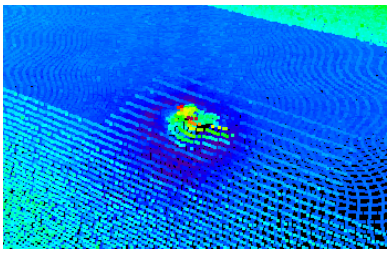

Figure 1.13.1

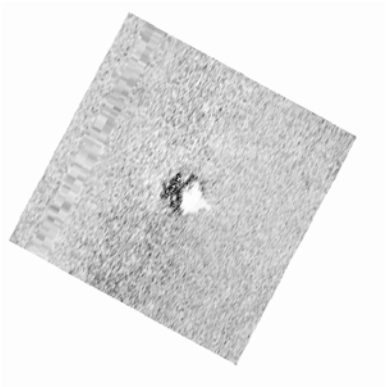

Figure 1.13.2

1.14) DTON - unidentified obstruction

DANGER TO NAVIGATION

Survey Summary

Survey Position: 029° 03' 16.401" N, 91° 44' 48.535" W

Least Depth: 7.66 m

Timestamp: 2005-174.09:14:11.334 (06/23/2005)

Survey Line: h11290 / tpe_da_mb_0 / 2005-174 / damba05174_d16

Profile/Beam: 16140/41

Charts Affected: 11351_1, 1116A_1, 11340_1, 411_1

Remarks:

The feature is the updated least depth over a DtoN that was submitted with a preliminary least depth. This specific feature (i.e., ping/beam) was not resubmitted because the cartographically rounded depth did not change. Although the DtoN was charted as an obstruction, it was charted with an accompanying "PA," which was not part of the original recommendation. The feataure was located with 200% SSS data (KLEIN 3000) and is covered with MBES data (a combinatio of RESON 8111 and RESON 8125). The least depth is from the RESON 8111 data. ***This DtoN was submitted to MCD on 06/06/05.***

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11290/tpe_da_mb_0/2005-174/damba05174_d16	16140/41	0.00	000.0	Primary
h11290/d2_sss_200/2005-127/d2_127_050507163200	0001	1.78	148.6	Secondary
h11290/da_sss_100/2005-174/da_174_050623085900	0001	1.91	024.9	Secondary
h11290/d2_sss_200/2005-127/d2_127_050507155000	0001	6.33	331.0	Secondary

Hydrographer Recommendations

The hydrographer recommends retaining the charted Obstrn, but removing the "PA" because the hydgrographer has a high level of confidence in the positioning of the feature.

Cartographically-Rounded Depth (Affected Charts):

25ft (11351_1)

4 ¼fm (1116A_1, 11340_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: VALSOU - 7.663 m

Feature Images

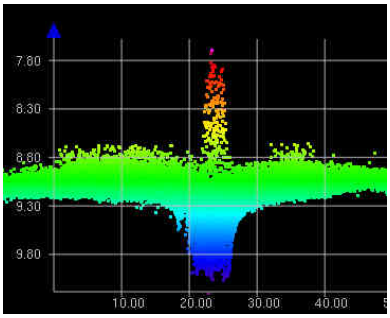

Figure 1.14.1

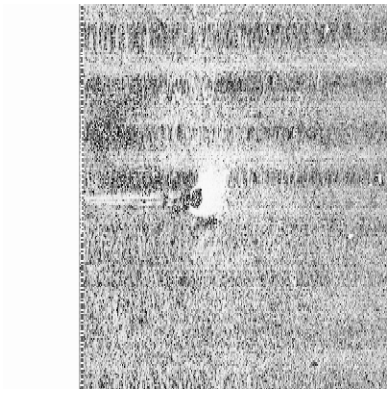

Figure 1.14.2

AHB PRE-COMPILATION PROCESS

REGISTRY No.	H11290
PROJECT No.	OPR-K354-TC-05
FIELD UNIT	TIME CHARTER
PRE-COMPILER	Bridget Williams
LARGEST SCALE CHART	11351, edition 40, 20070601 11340, edition 72, 20070701
CHART SCALE	1:80,000 1:458,596
SURVEY SCALE	1:20,000
DATE OF SURVEY	04/03/2005-07/31/2005
CONTENT REVIEW DATE	July 29, 2008 13:00-14:00

Components	File Names
Product Surface	PS_H11290_20k_200mrad_10mres.hns
Shifted Surface	PS_H11290_20k_200mrad_50mres_Shifted.hns
Contour Layer	H11290_Contours.hob
Survey Scale Soundings	H11290_SS_Soundings.hob
Chart Scale Soundings	H11290_CS_Soundings.hob
ENC Retain Soundings	N/A
Feature Layer	H11290_Features.hob
Meta-Objects Layer	H11290_MetaObjects.hob
Blue Notes	H11290_BlueNotes.hob

SPECIFICATIONS:

I. COMBINED SURFACE:
   a. File name: H11290_AHB_1m_Combined.hns
   b. Resolution: 1 m
   c. Final Grid Location: H:\Compilation\H11290_K354-TC\AHB_H11290\FinalGrids

II. PRODUCT SURFACE (SOUNDINGS):
   a. Scale: 1:20000
   b. Radius: 200 m
   c. Resolution: 10 m

   d. Depth
      i. Minimum: 5.087 m
      ii. Maximum: 19.386 m

   PRODUCT SURFACE (CONTOURS):
   a. Scale: 1:20000
   b. Radius: 200 m
   c. Resolution: 50 m

III. SHIFTED SURFACE:
   Single Shift Value: -0.229 *[-0.229m (feet), (≤ 10 fathoms)]*
   [-1.372m (fathoms), (> 10 fathoms)]

IV. CONTOUR LAYER:

a. Use a Depth List: H11290_NOAA_depth_curves_list.txt

Depth List:
3.658
5.486
9.144
18.288

b. Output Options:

i. Create contour lines:

1. Line Object: DEPCNT
2. Value Attribute: VALDCO

V. SOUNDING SELECTION:

a. Selection Criteria:

i. Radius
ii. Shoal biased
iii. Use Single-Defined Radius: 120 distance on ground (m)
iv. Filter: Generalized !=1

VI. FEATURES:

a. Brought in from Survey

Total No. 11(sbdare), 9 (obstructions)

b. Brought in from ENC

ENC: US4LA21M, US3GC03M
Total No. 0

VII. META-OBJECTS:

a. M_COVR attributes

Acronym	Value
INFORM	H11290
SORDAT	20050731
CATCOV	1
SORIND	US,US,survy,H11290

b. M_QUAL attributes

Acronym	Value
CATZOC	A2
INFORM	OPR-K354-TC-05, H11290, R/V Davidson
POSACC	10
SORDAT	20050731
SORIND	US,US,survy,H11290
SUREND	20050731
SURSTA	20050403
TECSOU	3

c. DEPARE attributes

Acronym	Value
DRVALV 1	4.800m
DRVALV2	20.000m
SORDAT	20050731
SORIND	US,US,nsurf,H11290
INFORM	H11290

d. M_CSCL attributes

Acronym	Value
CSCALE	80000
INFORM	H11290
SORDAT	20050731
SORIND	US,US,Chart,11351,ed.40,20070601

VIII. NOTES:

Sounding attribution:
TECSOU: 3
QUASOU: depth known
SORIND: US,US,nsurf,H11290
SORDAT: 20050731

BlueNotes:
H11290, Chart 11351, ed. 40, 20070601
H11290, Chart 11340, ed.72, 20070701

The table below indicates the status of platforms observed as existing at the time of H11290 and the status of platforms that were not observed. Final charting is deferred to MCD.

INDEX #	NAME	LATITUDE N	LONGITUDE W	CHARTING RECOMMENDATION
	SH-EI-95-A	29-04-06.00	091-42-12.00	Platform observed as charted.
	MOI-EI-93-9C&10C	29-05-06.00	091-45-31.00	Platform charted not observed
	LLOG-110-3	28-59-34.20	091-47-04.60	Platform observed as charted
	GRI-EI-95-9 ATON 23	29-04-17.88	091-42-11.82	Platform observed as charted
	MOI-EI-95-8	29-04-31.04	091-42-10.23	Platform observed as charted
	SH-EI-95-20 ATON 19	29-04-02.20	091-41-59.67	Platform observed as charted
	SH-EI-95-19 ATON 21	29-04-11.23	091-42-04.68	Platform observed as charted
	LL&E-EI-110-1	29-02-29.20	091-42-13.50	Platform charted on ENC US4LA21M not observed
	MOI-EI-92-11 ATON 9	29-04-32.00	091-45-29.00	Platform observed as charted
	MOI-EI-93-8 ATON 11	29-05-07.22	091-45-34.77	Platform observed as charted
	SH-EI-95-15	29-03-42.01	091-41-53.10	Platform observed as charted
	SH-EI-95-21 ATON 6	29-03-03.61	091-41-54.82	Platform observed as charted
	SH-EI-95-17	29-03-24.83	091-41-53.81	Platform observed as charted
		29-04-20.42	091-45-26.39	Platform observed as charted, platform is currently not charted on Chart 11340
	ATON 5	29-02-35.13	091-41-57.65	Platform observed as charted. (Chart on 11340, retain as charted on 11351)

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT to Accompany
Survey H11290 (2005)

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

B. DATA ACQUISITION AND PROCESSING

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

HSTP PYDRO version 7.3 r2239
CARIS HIPS/SIPS version 6.1 SP1 HF 1-6
CARIS Bathy Manager version 2.1 HF 1-3
DKART INSPECTOR, version 5.0 Build 732 SP1
CARIS HOM version 3.3
CARIS S57 Composer version 1.0

B.2. QUALITY CONTROL

B.2.1. H-Cell

The AHB source depth grid for the survey's nautical chart update product entailed the field's original 1m grids, combined at 1 meter resolution, then using them to create a product surface grid with a resolution of 10m. The survey scale selected soundings were extracted from the 10m product surface. The selected sounding set is approximately 10 to 20 times the number of charted depths. 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.

The pre-compilation products or components (Stand Alone HOB files (SAHOB)) are detailed in the Pre-Compile Process Log attached prior to this document. The SAHOB files included depth curves (DEPCNT), sounding selections (SOUNDG), features (SBDARE), Meta objects (M_COVR, M_QUAL, M_NSYS), and cartographic Blue Notes. The individual SAHOB files were inserted into one BASE Manager feature layer and exported to S57 format in order to create the H-Cell deliverable.

The completed H-Cell was exported as a Base Cell File (ENC.000) in S-57 format with all values in metric units. The metric equivalent ENC.000 file was then converted to NOAA chart units (ENC_CU.000) with all values measured in feet following NOAA sounding rounding rules.

Chart compilation was performed by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland.

The H11290 CARIS H-Cell final deliverables include the following products:

US411290_CU.000	**1:80,000 Scale**	**H11290 H-Cell with Chart Scale Selected Soundings**
US411290_SS.000	**1:20,000 Scale**	**H11290 Selected Soundings (Survey Scale)**
US411290_BlueNotes.000	**1:80,000 Scale**	**H11290 Cartographic Notes**

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

11351 (40th Edition, June/07)
Corrected through NM 06/16/2007
Corrected through LNM 06/12/2007
Scale 1:80,000

11340 (72nd Edition, July/07)
Corrected through NM 07/07/2007
Corrected through LNM 06/26/2007
Scale 1:458,596

ENC Comparison

US4LA21M
Point Au Fer to Marsh Island
Edition 14
Update Application Date 2007-11-07
Issue Date 2008-01-28
References: Chart 11351

US3GC03M
Mississippi River to Galveston
Edition 11
Update Application Date 2008-02-20
Issue Date 2008-03-04
References: Chart 11340

US2GC11M
Mobile Bay to Mexico
Edition 10
Update Application Date 2007-10-10
Issue Date 2007-10-10
References: Chart 4015

D.1.1 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&2 of the Descriptive Report. The following exceptions are noted:

The following is a table including the charted platforms investigated during this survey:

INDEX #	NAME	LATITUDE N	LONGITUDE W	CHARTING RECOMMENDATION
	SH-EI-95-A	29-04-06.00	091-42-12.00	Platform observed as charted.
	MOI-EI-93-9C&10C	29-05-06.00	091-45-31.00	Platform charted not observed
	LLOG-110-3	28-59-34.20	091-47-04.60	Platform observed as charted
	GRI-EI-95-9 ATON 23	29-04-17.88	091-42-11.82	Platform observed as charted
	MOI-EI-95-8	29-04-31.04	091-42-10.23	Platform observed as charted
	SH-EI-95-20 ATON 19	29-04-02.20	091-41-59.67	Platform observed as charted
	SH-EI-95-19 ATON 21	29-04-11.23	091-42-04.68	Platform observed as charted
	LL&E-EI-110-1	29-02-29.20	091-42-13.50	Platform charted on ENC US4LA21M not observed
	MOI-EI-92-11 ATON 9	29-04-32.00	091-45-29.00	Platform observed as charted
	MOI-EI-93-8 ATON 11	29-05-07.22	091-45-34.77	Platform observed as charted
	SH-EI-95-15	29-03-42.01	091-41-53.10	Platform observed as charted
	SH-EI-95-21 ATON 6	29-03-03.61	091-41-54.82	Platform observed as charted
	SH-EI-95-17	29-03-24.83	091-41-53.81	Platform observed as charted
		29-04-20.42	091-45-26.39	Platform observed as charted, platform is currently not charted on Chart 11340
	ATON 5	29-02-35.13	091-41-57.65	Platform observed as charted. (Chart on 11340, retain as charted on 11351)

D.3. MISCELLANEOUS

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

D.4. ADEQUACY OF SURVEY

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

APPROVAL SHEET
H11290

Initial Approvals:

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

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

Bridget E. Williams
2008.07.29 14:45:55
-04'00'

Bridget Williams
Hydrographic Intern
Atlantic Hydrographic Branch

Sarah M Eggleston
2008.07.29 14:44:31
-04'00'

Sarah M. Eggleston
Physical Scientist
Atlantic Hydrographic Branch

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

Approved: Shepard Smith
I am approving this document
2008.07.29 16:36:29 -04'00'

Shepard Smith
Lieutenant Commander, NOAA
Chief, Atlantic Hydrographic Branch

Mark Lathrop
Digitally signed by Mark Lathrop
DN: cn=Mark Lathrop, c=US, o=NOAA, ou=HSD, email=mark.t.lathrop@noaa.gov
Reason: AWOIS/Surf Check
Date: 2008.08.22 15:36:20 -04'00'