H12251

NOAA FORM 76-35A
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

DESCRIPTIVE REPORT

Type of Survey: Hydrographic Multibeam & 200% Sidescan

Project No. : OPR-K354-KR-10

Registry No. : H12251

LOCALITY

State: Louisiana

General Locality: Gulf of Mexico

Sublocality: 3 NM South of East Ship Shoal

2011

CHIEFS OF PARTY
Scott Croft, John Baker

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DATE:

NOAA FORM 77-28 (11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTRY No: H12251

FIELD NUMBER: Sheet 9

State: Louisiana

General Locality: Gulf of Mexico

Locality: 3 NM south of East Ship Shoal

Scale: 1:10,000 Date of Survey: August 2010 to September 2010

Instructions Dated: May 2010 Project Number: OPR-K354-KR-10

Vessels: *M/V Inez McCall*

Chiefs of Party: Scott Croft, John Baker

Surveyed by: C&C Technologies Personnel

Soundings taken by echosounder, hand lead line, or pole: Simrad EM3002 Multibeam Echo sounder

Verification by: C&C Technologies Personnel Atlantic Hydrographic Branch

HCell Compilation units in: Feet at MLLW

Soundings in: Feet: X Fathoms: _____ Meters: _____ at MLW: _____ MLLW: X

Remarks: Hydrographic Survey of Sheet 9 (H12251)
Data collection in meters, referenced to MLLW, later converted into feet
200% side scan sonar, with concurrent multibeam coverage
UTC time was used exclusively
Grab samples were not taken
Tidal Zones: CGM 716, 717, 718, 732, 733, WGM 266, 414, 415, 416
Tidal Station: 8762075 (Port Fourchon, LA)

Red, bold, italic notes in Descriptive Report were made during office processing

NOAA FORM 77-28 SUPERSEDES FORM C & GS - 537

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SEPARATES

Submitted with original field records

Separates I	Acquisition and Processing Logs
Separates II	Sound Speed Data
Separates III	Hydrographic Survey Project Instructions and Statement of Work
Separates IV	Crossline Comparisons
Separates V	Side Scan Contact Listing and Images of Significant Contacts

A. AREA SURVEYED

The survey area is located in the approximately three nautical miles south of East Ship Shoal in the Gulf of Mexico. Illustrations 1 and 2 show the layout of Sheet 9 (H12251) of Project (OPR-K354-KR-10). Water depths in the survey area range from 22 feet to 50 feet Mean Lower Low Water.

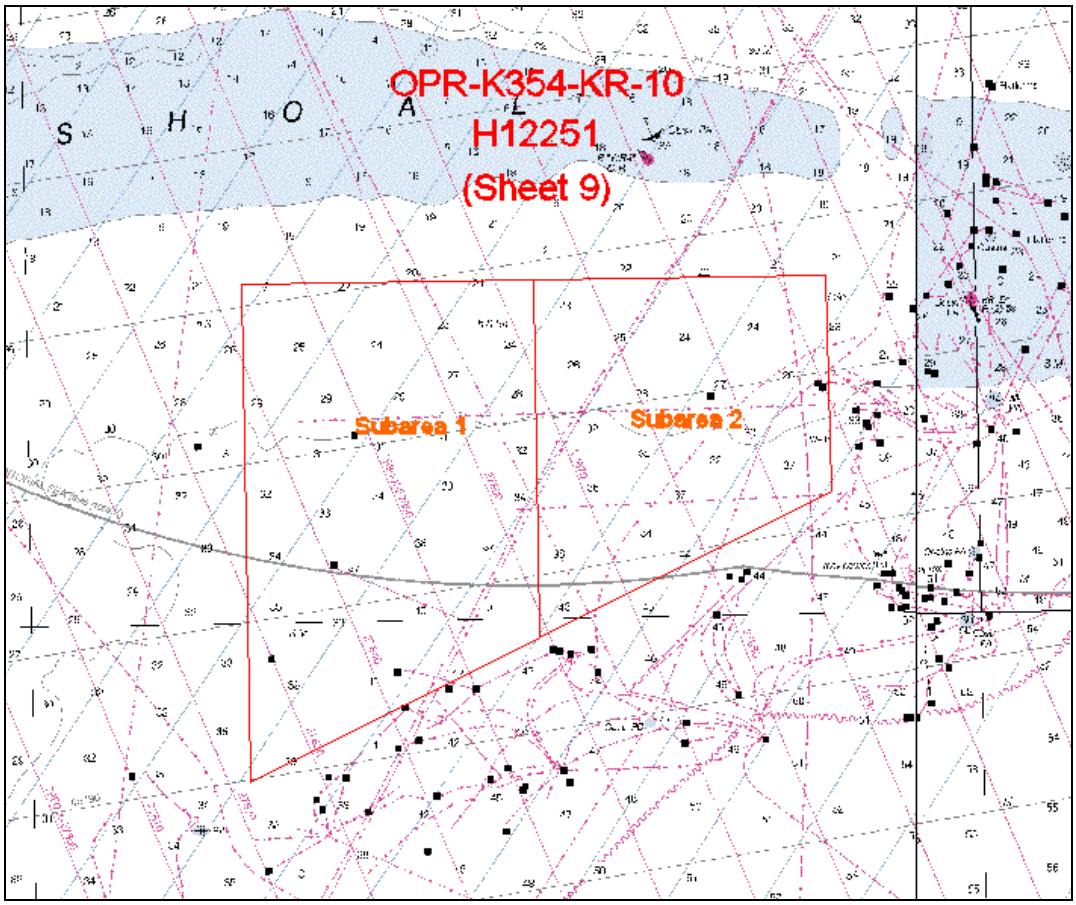


Illustration No. 1: Large Scale Survey Coverage Graphic

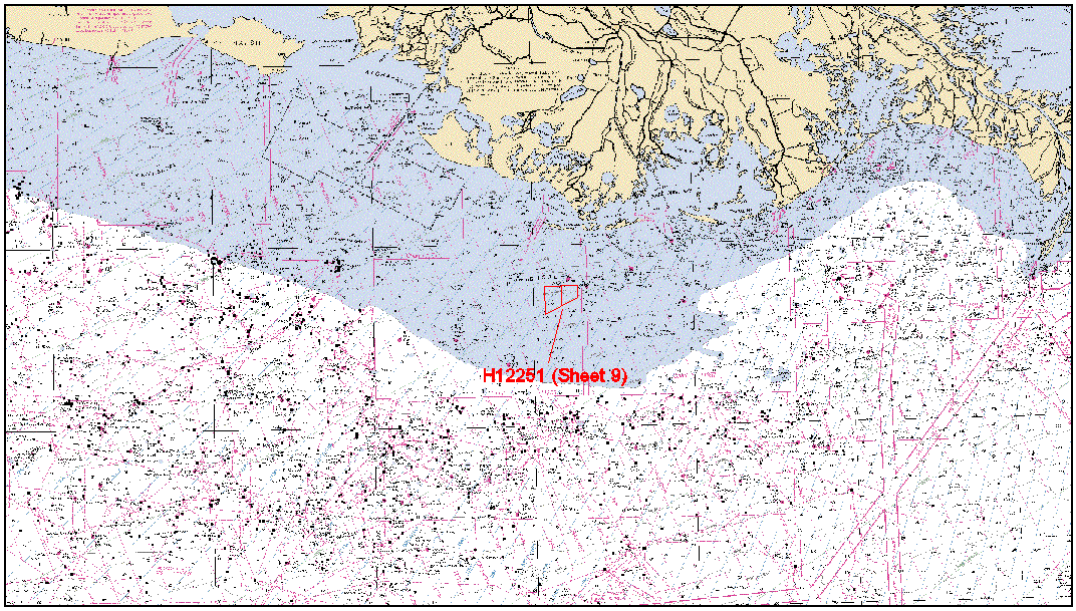


Illustration No. 2: Small Scale Survey Coverage Graphic

Table No. 1: Survey Statistics

	Inez McCall	Total
LNM Side Scan + Multibeam	417.52	417.52
LNM Crosslines	21.87	21.87
LNM Investigations	1.46	1.46

Number of items investigated	2
Total square nautical miles	19.31

ACQUISITION DATES
August 19-23, 25 2010
September 3-5, 9, 15 2010

B. DATA ACQUISITION AND PROCESSING

B.1 EQUIPMENT

Table No. 2: Equipment List

System	Manufacturer	Model
Multibeam Echo Sounder	Simrad	EM3002
Side Scan Sonar	Klein	5000
Single Beam Echo Sounder	ODOM	Echotrac DF3200 MK II
Motion Sensor	Applanix	POS MV
Primary Positioning System	CNAV	2050
Secondary Positioning System	CNAV	2050
Tertiary Positioning System	Applanix	POS MV
Sound Speed at Transducer	YSI Electronics	600R

System	Manufacturer	Model
Primary CTD	Seabird	SBE19 Plus
Secondary CTD	Seabird	SBE19

See Data Acquisition and Processing Report* for a detailed description of the equipment used for hydrographic operations. ***Submitted with HCell Deliverable***

The *M/V Inez McCall* conducted survey operations for this project. The vessel is 33.5 meters long and 7.5 meters wide with an approximate draft of 2.75 meters. A central reference point was established prior to the survey from which all relevant offsets were measured. Relevant offsets are presented in the following table.

Table No. 3: Equipment Offsets

LOCATIONS FROM CRP	Y (FORWARD)	X (STARBOARD)	Z (VERTICAL)
PRIMARY C-NAV	2.977m	-0.457m	-6.491m
SECONDARY C-NAV	3.052m	0.476m	-6.490m
PRIMARY POS MV	2.990m	-0.971	-6.500m
SECONDARY POS MV	3.044m	0.965m	-6.478m
SINGLEBEAM DUCER	14.304m	0.170m	3.098m
MULTIBEAM DUCER	14.518m	0.170m	3.048m
PRIMARY POS MV IMU	14.976m	ON ℄	-1.372m
DRAFT TUBE	-8.953m	2.621m	0.655m
SSS SHEAVE	-18.730m	ON ℄	-5.452m
MAG SHEAVE	-18.955m	2.133m	-4.480m
SBP SHEAVE	-14.485m	-4.85m	-3.100m
DF SINGLEBEAM DUCER	14.426m	-0.265m	3.090m
SECONDARY POS MV IMU	14.976m	ON ℄	-1.157m

A detailed vessel description, vessel diagram, and patch test results are presented in the Data Acquisition and Processing Report*. ***Submitted with HCell Deliverable***

B.2 QUALITY CONTROL

In order to efficiently carry out this survey, the survey lines were oriented roughly east west throughout the survey area. The side scan was operated with a range of 100 meters per channel, and line spacing was set to 90 meters. These parameters allowed us to effectively meet the criteria of 200 percent side scan coverage, using Technique 2, as set forth in Section 6.1 of the "Specifications and Deliverables" document. The angular sector on the multibeam was set so that the criterion of two times water depth, as well as all accuracy, resolution, and detection criteria as set forth in Sections 5.2 and 5.3 of the "Specifications and Deliverables" document, were met.

The internal consistency of the multibeam depth values is quantified in the crossline statistics that were performed at the end of each main line. Crosslines were run prior to the collection of main line data so that quality control statistics could be performed on the data after each line. Based on pre-plot calculations, the total crossline miles were 18 nm, while the total main line miles were 339 nm. The cross lines comprised about five percent of the total data

set as compared to the main scheme lines. Rerun line miles are not included in these totals. As can be seen in the sample statistics found in Separates V*, the main lines and cross lines depth values showed very good agreement. Each main line was compared to all cross lines for which there was overlapping data. The graphs shown in Separates V* are a random sample of the graphs that were produced. The graphs show the mean difference, RMS difference, and confidence interval for each beam. The results show that the multibeam data was repeatable with 90 percent of the soundings within 8 to 14 centimeters across the swath. The two BASE surfaces for Sheet 9 were created at a scale of 1:10000 with a resolution of two meters. Soundings between the base surfaces agree to within 1 foot in all areas, with no visible draft or tidal errors between the survey junctions. No further corrections to soundings are necessary. ***Submitted with original field records***

Multibeam quality control procedures are outlined in Section B.1 of the accompanying Data Acquisition and Processing Report*. ***Submitted with HCell Deliverable***

B.3 CORRECTIONS TO ECHO SOUNDINGS

No deviations from the Correction to Echo Soundings section in the Data Acquisition and Processing Report* occurred. ***Submitted with HCell Deliverable***

C. VERTICAL AND HORIZONTAL CONTROL

Tide and water level corrections were determined and applied in accordance with the Co-ops Statement of Work. Data from Port Fourchon, LA (8762075) was used as the source of tides. The vertical datum for the soundings is Mean Lower Low Water (MLLW). The horizontal datum for the survey is the North American Datum of 1983 (NAD 83) and the projection is Universal Transverse Mercator (UTM) Zone 15 North.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

D.1.1 CHARTS AND NOTICES TO MARINERS

The following charts were used for comparison purposes.

Table No. 4: Nautical Charts used for Comparison

Chart Number	Scale	Edition	Edition Date
11356	1:80,000	38	Jun 08

The following table shows the last corrected NM and LNM for each digital chart.

Table No. 5: Nautical Chart Correction Dates

Chart Number	Corrected Through	
	NM	LNM
11356	Jun 14/08	Jun 03/08

D.1.2 CHARTED FEATURES

There are no charted features found within the H12251 survey area. ***Do not concur. There is a charted well (OBSTRN) located at 28-51-37.44N, 90-51-33.10W. There are also charted platforms, discussed in section D.2.3 of this report.***

D.1.3 NOTICES TO MARINERS

The Notices to Mariners were reviewed from the last updated notice for each digital chart, to September 2010. During that time, there were no notices to mariners issued for the charted area within the survey bounds.

D.1.4 CHARTED SOUNDINGS

<u>Chart 11356</u>

In general, charted soundings are 2-4 feet shoaler than surveyed soundings. This is shown in Illustration No. 3. The thirty-foot contour should be shifted to the north to reflect this discrepancy. ***Concur. Defer final contour disposition to MCD cartographer.***

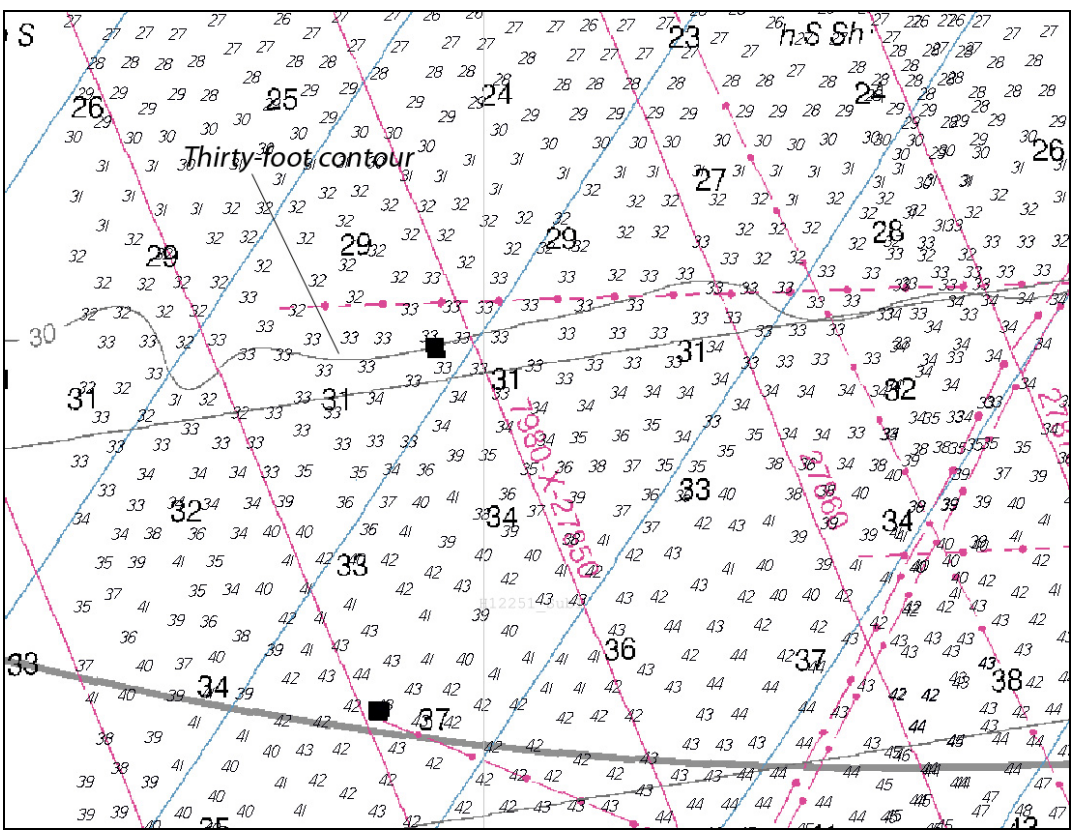


Illustration No. 3: Chart No. 11356 Comparison

There are a number of areas where the difference between the charted and the surveyed soundings is nearly eight feet. The seafloor in these areas has greater depth changes than the

surrounding area, and with the relative sparseness of charted soundings, it would be difficult for the chart to reflect these depth changes. The color-shaded bathymetry shown in Illustration No. 4 shows theses seafloor changes very well.

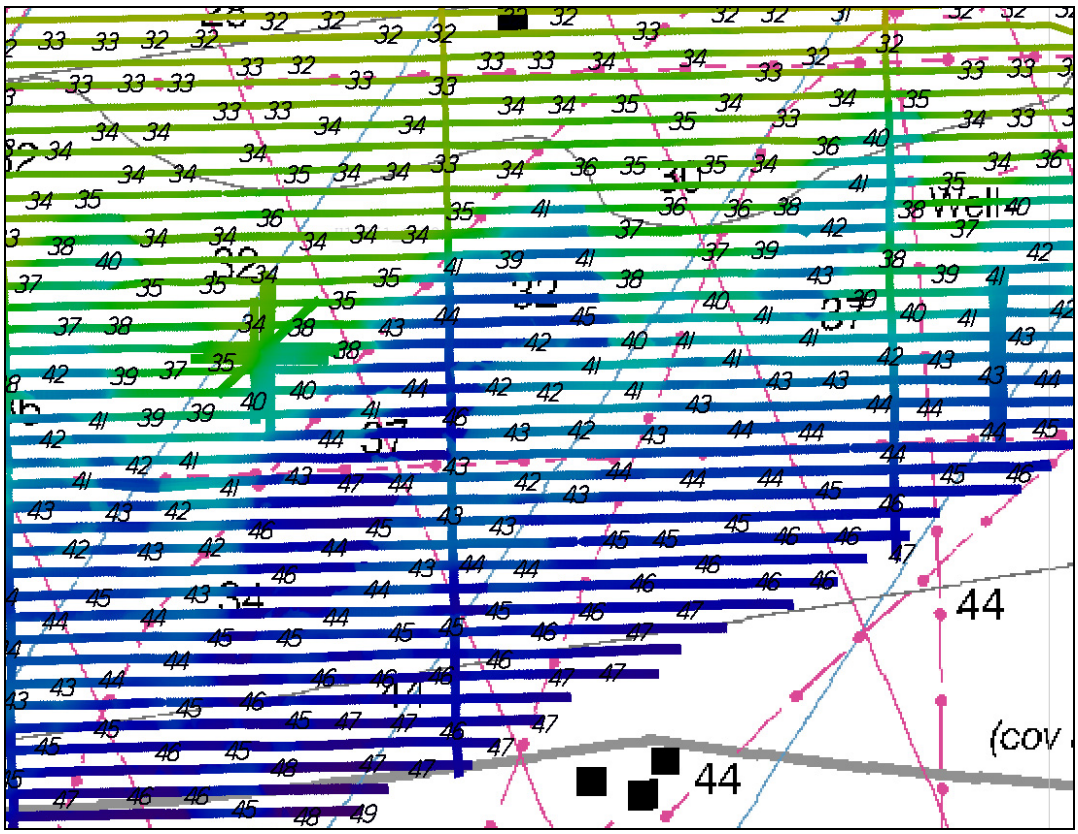


Illustration No. 4: Color-shaded bathymetry

D.1.5 SHOALS AND HAZARDOUS FEATURES

There are no charted shoals or hazardous features found within the survey area and none were found during survey operations. ***Concur***

D.1.6 AWOIS ITEMS

No AWOIS items were assigned for full investigation within the H12251 survey area. ***Concur***

D.1.7 INVESTIGATION ITEMS

Additional investigation work was performed for two significant sonar contacts. Four to six additional multibeam and side scan lines were run over each of these targets. After investigation, both of these contacts were deemed insignificant, and have not been further reported on. ***Do not concur. There is an exposed pipeline (28-51-05.57N, 90-54-42.81W) in one development that is not represented in the grid. This pipeline was designated during office processing and is included in the 50cm development grid.***

D.1.8 DANGER TO NAVIGATION REPORTS

No danger to navigation reports were issued for the H12251 survey area. ***Concur***

D.2 ADDITIONAL RESULTS

D.2.1 PRIOR SURVEYS

Comparison with prior surveys was not required under this Task Order. See Section D.1 for comparison to nautical charts. ***Concur with clarification. The SOW identified three C&C surveys from 2010 that junction with H12251: H12068, H12069, and H12121 as well as one SAIC survey from 2008. Survey H12251 does not junction with H12068 or H11783. It does junction with H12069 soundings within 1 foot and H12121 within 1 foot.***

D.2.2 AIDS TO NAVIGATION

There are no charted aids to navigation within the H12251 survey area, and none were found during survey operations. ***Concur***

D.2.3 EXISTING INFRASTUCTURE

The following platforms were found as charted. ***Concur***

Table No. 6: Charted Platforms – Found as Charted

Surveyed Position			
Latitude	Longitude	Platform Name	Chart Action
28°49'32.628"N	90°56'09.313"W	SS 119 V	Remain on chart
28°49'22.152"N*	90°55'37.216"W*	SS 119 C*	Remain on chart*
28°50'31.131"N	90°56'48.042"W	SS 111 B	Remain on chart
28°50'31.389"N	90°56'46.573"W	SS 111 A	Remain on chart

****Platform SS 119 C addressed in junction survey H12121.***

The following is a list of structures that are currently charted, but were no longer present at the time of the survey. ***Concur***

Table No. 7: Charted Platforms – Not Present

Charted Position		
Latitude	Longitude	Chart Action
28°49'40.649"N	90°57'28.605"W	Delete
28°51'44.410"N	90°56'33.692"W	Delete
28°52'03.028"N	90°52'48.192"W	Delete
28°52'06.895"N	90°51'37.282"W	Delete
28°52'09.051"N	90°51'39.968"W	Delete
28°49'12.191"N*	90°56'04.435"W*	Delete*

****Platform disproval addressed in junction survey H12121.***

D.2.4 OTHER PERTINENT INFORMATION

Draft corrections were verified on a daily basis, and entered into the multibeam collection software to be applied in real-time. Draft was entered directly into the single beam.

Two BASE surfaces were created for this project, these BASE surfaces were created at a two meter resolution.

All of the side scan data collected for this project has been layback corrected. Data should be imported into Caris using fish position and zero layback correction.

The following is a list of acronyms that may be found in the DR, DAPR, project logs, sidescan sonar logs and sonar contact listing.

HM	Harmonic mean
WD	Water depth
LL	Lead line
MB	Multibeam
SB	Singlebeam
WOW	Wait on weather
EOL	End of line
SOL	Start of line
SSS	Side scan sonar
RR	Re-run
SS	Ship Shoal (block name)
ST	South Timbalier (block name)
PL	South Pelto (block name)
SSP	Sound Speed Profile
C/I	Cable in
C/O	Cable out
Wpt	Waypoint
P/L	Pipeline
P/F	Platform

A S57 feature files for oil and gas infrastructure have been submitted in a Caris Notebook project.

All TPU values were calculated using the following settings in CARIS.

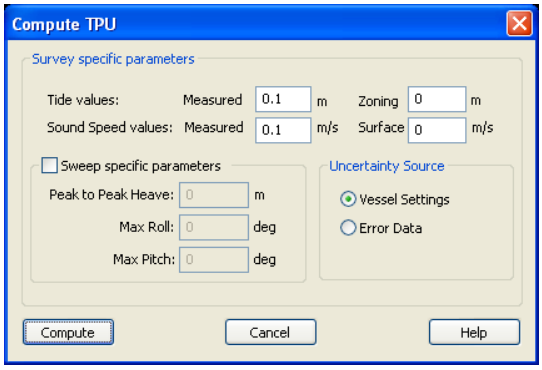


Illustration No. 5: CARIS TPU Settings

LETTER OF APPROVAL

REGISTRY NUMBER H12251

This report and the accompanying smooth sheet are respectfully submitted.

Field operations contributing to the accomplishment of the survey H12251 were conducted under my direct supervision with frequent personal checks of progress and adequacy. This report and CARIS project have been closely reviewed and are considered complete and adequate as per the Statement of Work.

This report is accompanied by the Data Acquisition and Processing Report for project OPR-K354-KR-10.

John Baker
Chief of Party
C&C Technologies
May 2011

APPENDIX I

DANGER TO NAVIGATION REPORTS

There were no danger to navigation reports issued for the H12251 survey area. .

APPENDIX II

SURVEY FEATURE REPORT

H12251 Platforms

Registry Number:

State:

Locality:

Sub-locality:

Project Number:

Survey Date: 09/15/2010

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11356	38th	06/01/2008	1:80,000 (11356_1)	[L]NTM: ?
11340	73rd	08/01/2008	1:458,596 (11340_1)	[L]NTM: ?
1116A	73rd	08/01/2008	1:458,596 (1116A_1)	[L]NTM: ?
411	52nd	09/01/2007	1:2,160,000 (411_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	SS 111 B	GP	[None]	28° 50' 31.1" N	090° 56' 48.0" W	---
1.2	SS 111 A	GP	[None]	28° 50' 31.4" N	090° 56' 46.6" W	---
1.3	SS 119 V	GP	[None]	28° 49' 32.6" N	090° 56' 09.3" W	---

1 - Platform

1.1) SS 111 B

Survey Summary

Survey Position: 28° 50' 31.1" N, 090° 56' 48.0" W

Least Depth: [None]

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

Timestamp: 2010-258.00:00:00.000 (09/15/2010)

GP Dataset: COMPILE / Working / HOB's / H12251_Pydro.000

GP No.: 0226000055AF0001

Charts Affected: 11356_1, 1116A_1, 11340_1, 411_1

Remarks:

OFSPLF/remrks: Platform found as charted

Feature Correlation

Address	Feature	Range	Azimuth	Status
COMPILE/Working/HOB's/H12251_Pydro.000	0226000055AF0001	0.00	000.0	Primary

Hydrographer Recommendations

Remain on chart

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: NINFOM - Add OFSPLF

SORDAT - 20100915

SORIND - US,US,graph,H12251

Office Notes

SAR: Platform confirmed.

Compile: Concur. Delete charted platform. Add OFSPLF at survey position.

1.2) SS 111 A

Survey Summary

Survey Position: 28° 50' 31.4" N, 090° 56' 46.6" W

Least Depth: [None]

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

Timestamp: 2010-258.00:00:00.000 (09/15/2010)

GP Dataset: COMPILE / Working / HOB's / H12251_Pydro.000

GP No.: 0226000055B00001

Charts Affected: 11356_1, 1116A_1, 11340_1, 411_1

Remarks:

OFSPLF/remrks: Platform found as charted

Feature Correlation

Address	Feature	Range	Azimuth	Status
COMPILE/Working/HOB's/H12251_Pydro.000	0226000055B00001	0.00	000.0	Primary

Hydrographer Recommendations

Remain on chart

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: NINFOM - Add OFSPLF

SORDAT - 20100915

SORIND - US,US,graph,H12251

Office Notes

SAR: Platform confirmed.

Compile: Concur. Delete charted platform. Add OFSPLF at survey position.

1.3) SS 119 V

Survey Summary

Survey Position: 28° 49' 32.6" N, 090° 56' 09.3" W

Least Depth: [None]

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

Timestamp: 2010-258.00:00:00.000 (09/15/2010)

GP Dataset: COMPILE / Working / HOB's / H12251_Pydro.000

GP No.: 0226000055AD0001

Charts Affected: 11356_1, 1116A_1, 11340_1, 411_1

Remarks:

OFSPLF/remrks: Platform found as charted

Feature Correlation

Address	Feature	Range	Azimuth	Status
COMPILE/Working/HOB's/H12251_Pydro.000	0226000055AD0001	0.00	000.0	Primary

Hydrographer Recommendations

Remain on chart

S-57 Data

Geo object 1: Offshore platform (OFSPLF)

Attributes: NINFOM - Add OFSPLF

SORDAT - 20100915

SORIND - US,US,graph,H12251

Office Notes

SAR: Platform confirmed.

Compile: Concur. Delete charted platform. Add OFSPLF at survey position.

H12251 Disprovals

Registry Number:

State:

Locality:

Sub-locality:

Project Number:

Survey Date: 01/01/1981

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11356	38th	06/01/2008	1:80,000 (11356_1)	[L]NTM: ?
11340	73rd	08/01/2008	1:458,596 (11340_1)	[L]NTM: ?
1116A	73rd	08/01/2008	1:458,596 (1116A_1)	[L]NTM: ?
411	52nd	09/01/2007	1:2,160,000 (411_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Disproval	GP	[None]	28° 49' 40.8" N	090° 57' 28.4" W	---
1.2	Disproval	GP	[None]	28° 51' 44.2" N	090° 56' 33.4" W	---
1.3	Disproval	GP	[None]	28° 52' 02.8" N	090° 52' 47.7" W	---
1.4	Disproval	GP	[None]	28° 52' 09.5" N	090° 51' 39.7" W	---
1.5	Disproval	GP	[None]	28° 52' 06.3" N	090° 51' 36.8" W	---
1.6	Disproval	GP	[None]	28° 51' 37.0" N	090° 51' 34.6" W	---

1 - Disproval

1.1) Disproval

Survey Summary

Survey Position: 28° 49' 40.8" N, 090° 57' 28.4" W

Least Depth: [None]

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

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: COMPILE / Working / HOB's / H12251_Pydro.000

GP No.: 0226000055B10001

Charts Affected: 11356_1, 1116A_1, 11340_1, 411_1

Remarks:

200% SSS, no platform

Feature Correlation

Address	Feature	Range	Azimuth	Status
COMPILE/Working/HOB's/H12251_Pydro.000	0226000055B10001	0.00	000.0	Primary

Hydrographer Recommendations

remove from chart

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete OFSPLF

Office Notes

SAR: Confirmed platform disproval.

Compile: Concur. Delete charted platform.

1.2) Disproval

Survey Summary

Survey Position: 28° 51' 44.2" N, 090° 56' 33.4" W

Least Depth: [None]

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

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: COMPILE / Working / HOB's / H12251_Pydro.000

GP No.: 0226000055B30001

Charts Affected: 11356_1, 1116A_1, 11340_1, 411_1

Remarks:

200% SSS, no platform

Feature Correlation

Address	Feature	Range	Azimuth	Status
COMPILE/Working/HOB's/H12251_Pydro.000	0226000055B30001	0.00	000.0	Primary

Hydrographer Recommendations

remove from chart

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete OFSPLF

Office Notes

SAR: Confirmed platform disproval.

Compile: Concur. Delete charted platform.

1.3) Disproval

Survey Summary

Survey Position: 28° 52' 02.8" N, 090° 52' 47.7" W

Least Depth: [None]

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

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: COMPILE / Working / HOB's / H12251_Pydro.000

GP No.: 0226000055B40001

Charts Affected: 11356_1, 1116A_1, 11340_1, 411_1

Remarks:

200% SSS, no platform

Feature Correlation

Address	Feature	Range	Azimuth	Status
COMPILE/Working/HOB's/H12251_Pydro.000	0226000055B40001	0.00	000.0	Primary

Hydrographer Recommendations

remove from chart

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete OFSPLF

Office Notes

SAR: Confirmed platform disproval.

Compile: Concur. Delete charted platform.

1.4) Disproval

Survey Summary

Survey Position: 28° 52' 09.5" N, 090° 51' 39.7" W

Least Depth: [None]

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

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: COMPILE / Working / HOB's / H12251_Pydro.000

GP No.: 0226000055B50001

Charts Affected: 11356_1, 1116A_1, 11340_1, 411_1

Remarks:

200% SSS, no platform

Feature Correlation

Address	Feature	Range	Azimuth	Status
COMPILE/Working/HOB's/H12251_Pydro.000	0226000055B50001	0.00	000.0	Primary

Hydrographer Recommendations

remove from chart

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete OFSPLF

Office Notes

SAR: Confirmed platform disproval.

Compile: Concur. Delete charted platform.

1.5) Disproval

Survey Summary

Survey Position: 28° 52' 06.3" N, 090° 51' 36.8" W

Least Depth: [None]

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

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: COMPILE / Working / HOB's / H12251_Pydro.000

GP No.: 0226000055B60001

Charts Affected: 11356_1, 1116A_1, 11340_1, 411_1

Remarks:

200% SSS, no platform

Feature Correlation

Address	Feature	Range	Azimuth	Status
COMPILE/Working/HOB's/H12251_Pydro.000	0226000055B60001	0.00	000.0	Primary

Hydrographer Recommendations

remove from chart

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: NINFOM - Delete OFSPLF

Office Notes

SAR: Confirmed platform disproval.

Compile: Concur. Delete charted platform.

1.6) Disproval

Survey Summary

Survey Position: 28° 51' 37.0" N, 090° 51' 34.6" W

Least Depth: [None]

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

Timestamp: 1981-001.00:00:00.000 (01/01/1981)

GP Dataset: COMPILE / Working / HOB's / H12251_Pydro.000

GP No.: 0226000055B70001

Charts Affected: 11356_1, 1116A_1, 11340_1, 411_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
COMPILE/Working/HOB's/H12251_Pydro.000	0226000055B70001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol ($CSYMB)

Attributes: INFORM - well head

NINFOM - Delete OBSTRN

Office Notes

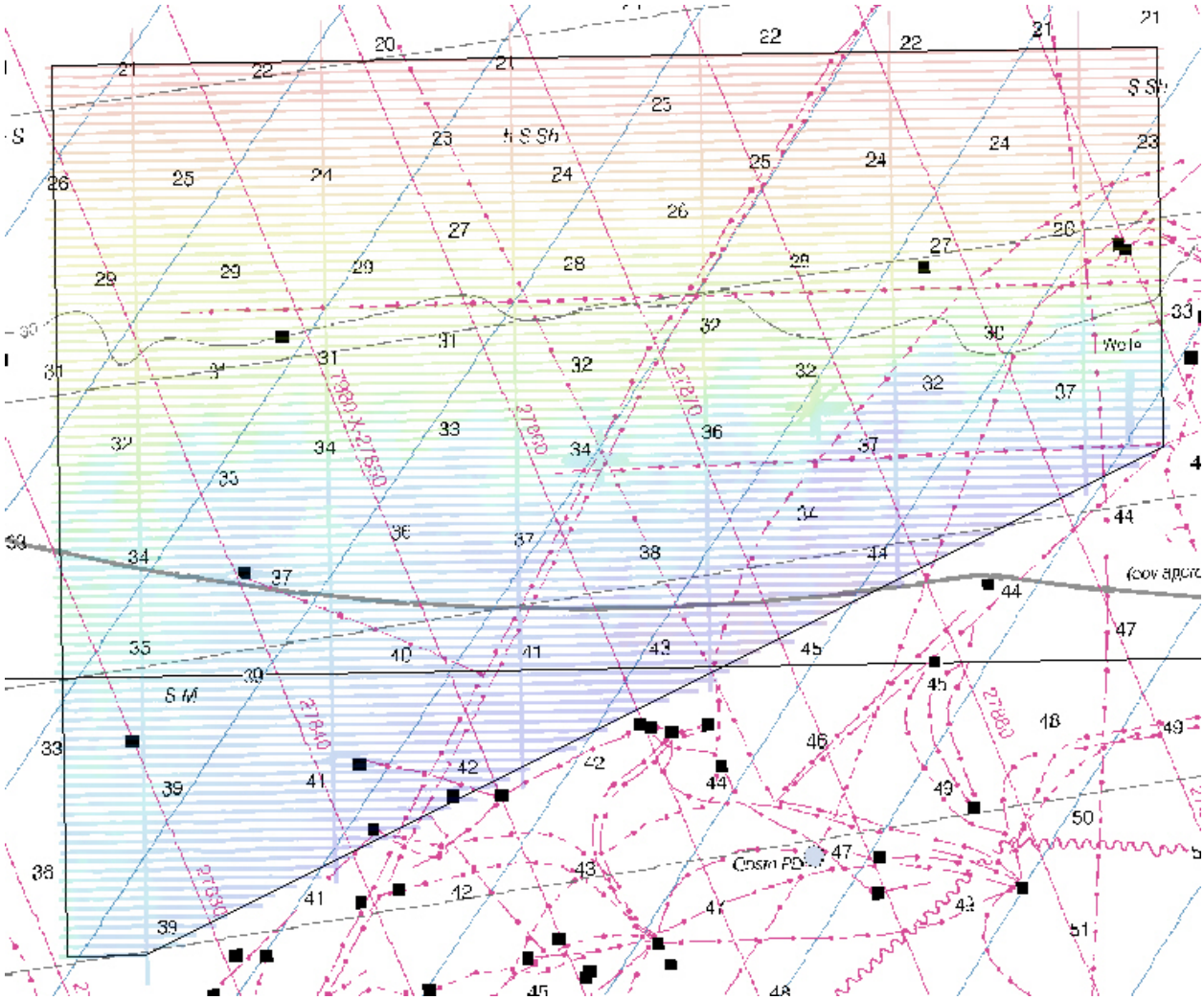
SAR: Feature not addressed by the field unit. AHB disproved the charted well based on the side scan data.

Compile: Concur. Delete charted well (ENC OBSTRN).

APPENDIX III

RESERVED

Final Outline of H12251



Contractor C&C Technologies

Survey Progress Estimate -- May 2011 - Field Work Complete

FY 2010 Task Order Number 6

OPS					FIELD														
Project Number and Name	Sheet Identifier	Registry Number	HQ Estimated SNM	SNM Completed Survey Outline	Date Field Work Began	Date Field Work Completed	Estimated Date of Survey Submission	June Cumulative % Complete	July Cumulative % Complete	August Cumulative % Complete	September Cumulative % Complete	October Cumulative % Complete	November Cumulative % Complete	December Cumulative % Complete	January Cumulative % Complete	February Cumulative % Complete	March Cumulative % Complete	April Cumulative % Complete	May Cumulative % Complete
	1	H12243	12	12.92	18-Jun-10	2-Aug-10	Dec 2010	95%	99%	100%									
	2	H12244	13	9.71	22-Jun-10	2-Aug-10	Dec 2010	80%	99%	100%									
	3	H12245	9	15.41	12-Jul-10	2-Aug-10	Dec 2010		99%	100%									
	4	H12246	14	17.33	16-Jul-10	17-Oct-10	Feb2011		33%	87%	99%	100%							
	5	H12247	16	14.70	8-Aug-10	9-Sep-10	Mar2011			99%	100%								
	6	H12248	26	27.30	5-Sep-10	17-Oct-10	Mar2011				99%	100%							
OPR-K354-KR-10	7	H12249	26	27.67	17-Oct-10	27-May-11	June 2011					43%	43%	48%	92%	95%	97%	97%	100%
Louisiana Coast, LA	8	H12250	18	27.23	14-Feb-11	27-May-11	June 2011									19%	51%	72%	100%
	9	H12251	26	19.31	21-Aug-10	15-Sep-10	June 2011			63%	100%								
	10	H12252	26	27.19	29-Sep-10	17-Oct-10	June 2011				19%	100%							
	11	H12253	26	28.41	10-Dec-10	26-Feb-11	June2011							42%		100%			
	12	H12254	17	18.76	2-Dec-10	10-Dec-10	May 2011							100%					
	13	H12255	37	27.35	22-Oct-10	11-Nov-10	June2011					37%	100%						
	14	H12269	18	20.66	11-Nov-10	2-Dec-10	June2011						99%	100%					

APPENDIX IV

TIDES AND WATER LEVELS

The tidal data applied to all multibeam echo sounder data was downloaded from the following website:

http://tidesandcurrents.noaa.gov/station_retrieve.shtml?type=Historic%20Tide%20Data&state=Louisiana&id1=876

ABSTRACT OF TIMES OF HYDROGRAPHY

Project: OPR-K354-KR-10
Contractor Name: C & C Technologies, Inc.
Inclusive Dates: August 19, 2010 - September 15, 2010
Registry No.: H12251 (Sheet 9)
Date: May 2011
Sheet Number: 9
Field Work is Complete
Time (UTC)

Date	Julian Day	Start	End	Year
8/19/2010	231	1407	2400	2010
8/20/2010	232	0000	2400	2010
8/21/2010	233	0000	2123	2010
8/22/2010	234	0034	1312	2010
8/23/2010	235	0802	1555	2010
8/25/2010	237	1559	2215	2010
9/3/2010	246	0315	1528	2010
9/3/2010	246	1956	2400	2010
9/4/2010	247	0000	1812	2010
9/5/2010	248	0128	1352	2010
9/9/2010	252	0834	1525	2010
9/15/2010	258	0743	0802	2010

APPENDIX V

SUPPLEMENTAL SURVEY RECORDS AND CORRESPONDANCE

This Document is for Office Process use only and is intended to supplement, not supersede or replace, information/recommendations in the Descriptive or H-Cell Reports.

AHB COMPILATION LOG

General Survey Information	
REGISTRY No.	H12251
PROJECT No.	OPR-K354-KR-10
FIELD UNIT	C&C
DATE OF SURVEY	20100819 - 20100915
LARGEST SCALE CHART	***11356_1, edition 38, June 2008, 1:80,000***
SOUNDING UNITS	**FEET**
COMPILER	Wyllie

Source Grids	**File Name** H:\Compilation\H12251_K354_CC\AHB_H12251\SAR Final Products\GRIDS
	H12251_50cm_Dev1_Final.csar **H12251_50cm_Dev2_Final.csar** **H12251_50cm_Dev3_Final.csar** **H12251_Sub1_2m_Final.csar** **H12251_Sub2_2m_Final.csar**
Surfaces	**File Name** H:\Compilation\H12251_K354_CC\AHB_H12251\COMPILE\Working
Combined	**H12251_4m_Combined.csar**
Interpolated TIN	\Interpolated TIN**H12251_12m_InterpTIN.csar**
Shifted Interpolated TIN	\Shifted Surface**H12251_12m_InterpTIN_Shifted.csar**
Final HOBs	**File Name** H:\Compilation\H12251_K354_CC\AHB_H12251\COMPILE\Final_Hobs
Survey Scale Soundings	**H12251_SS_Soundings.hob**
Chart Scale Soundings	**H12251_CS_Soundings.hob**
Contour Layer	**H12251_Contours.hob**
Feature Layer	**H12251_Features.hob**
Meta-Objects Layer	**H12251_MetaObjects.hob**
Blue Notes	**H12251_BlueNotes.hob**

Meta-Objects Attribution	
Acronym	**Value**
M_COVR	
CATCOV	1 – coverage available
SORDAT	20100915
SORIND	US,US,graph,H12251
M_QUAL	
CATZOC	6 – zone of confidence U (data not assessed)
INFORM	M/V Inez McCall
POSACC	10.0 m
SORDAT	20100915
SORIND	US,US,graph,H12251
SUREND	20100915
SURSTA	20100819
DEPARE	
DRVALV 1	21.000 ft
DRVALV2	50.000 ft
SORDAT	20100915
SORIND	US,US,graph,H12251

SPECIFICATIONS:

I. COMBINED SURFACE:
- a. Number of SAR Final Grids: 5
- b. Resolution of Combined (m): 4 m

II. SURVEY SCALE SOUNDINGS (SS):
- a. Attribute Name: Depth
- b. Selection criteria: Radius, Shoal bias
- c. Radius value is: mm at map scale
  - i. radius table file: H12251_SS_SSR.txt

H12251_SS_SSR.txt - Notepad

```
0.000000        14.0208 1.1
14.02081        30.0    1.2
```

- d. Queried Depth of All Soundings
  - i. Minimum: 22.773ft
  - ii. Maximum: 49.747ft

III. INTERPOLATED TIN SURFACE:
- a. Resolution (m): 12 m
- b. Interpolation method: Natural Neighbor
- c. Shift value: -0.75 ft

IV. CONTOURS:
- a. Attribute Name: Depth
- b. Use a Depth List: H12251_depth_contours.txt
- c. Output Options: Create contour lines
  - i. Line Object: DEPCNT
  - ii. Value Attribute: VALDCO

V. FEATURES:
- a. Number of Chart Features: 6
- b. Number of Non-Chart Features: 0

VI. CHART SURVEY SOUNDINGS (CS):
- a. Number of ENC CS Soundings: 55
- b. Attribute Name: Depth
- c. Selection criteria: Radius, Shoal bias
- d. Radius value is: Distance on the ground (m)
  - i. radius table file: H12251_CS_SSR.txt

H12251_CS_SSR.txt - Notepad

```
0.000000        13.4112 950
13.41121        15.2400 1100
15.24001        50.0000 1200
```

- e. Number Survey CS Soundings: 59

ATLANTIC HYDROGRAPHIC BRANCH
H-CELL REPORT to ACCOMPANY
SURVEY H12251 (2010)

This H-Cell Report has been written to supplement and/or clarify the original Descriptive Report (DR) and pass critical compilation information to the cartographers in the Marine Chart Division. Sections in this report refer to the corresponding sections of the Descriptive Report.

B. DATA ACQUISITION AND PROCESSING

B.2 QUALITY CONTROL

The AHB source depth grids for the survey's nautical chart update were 2m and 50cm resolution BASE surfaces (*.CSAR), which were combined at 4m resolution. The survey scale soundings were created from the combined surface using a sounding spacing range (SSR) file at the largest scale chart covering the respective area of the survey (Chart 11356_1, 1:80,000). The SSR values are included in the AHB Compilation Log section of this Descriptive Report. The survey scale soundings were imported into a "point cloud" grid. The chart scale soundings were derived directly from the survey scale soundings point cloud grid using an SSR file, therefore, preserving absolute continuity between the charted depths, the survey scale soundings, and the original source grid. The surface model was referenced when selecting the chart scale soundings, to ensure that the selected soundings portray the bathymetry within the common area.

A UTM projected TIN surface was created from the survey scale soundings point cloud grid, from which an interpolated surface of 12m resolution was generated. The interpolated TIN surface of 12m resolution was shifted by the NOAA sounding rounding value of -0.75 feet. The shifted interpolated TIN was used to generate the 30ft depth contour. The depth contour is forwarded to MCD for reference only. The contour was utilized during chart scale sounding selection and quality assurance efforts at AHB. The depth contour is incorporated into the SS H-Cell product as per 2009 H-Cell Specifications.

The compilation products (Final *.HOB files) for this survey are detailed in the H12251 AHB Compilation Log contained within this document. The Final HOB files include depth areas (DEPARE), depth contours (DEPCNT), soundings (SOUNDG), meta-objects (M_COVR and M_QUAL), cartographic Blue Notes ($CSYMB), and features (OFSPLF and SBDARE).

As dictated by Hydrographic Technical Directive 2008-8, the Final HOB files were combined into two separate H-Cell files in S-57 format. Both S-57 files were exported from CARIS S-57 Composer in feet. Quality assurance and topology checks were conducted using CARIS S-57 Composer and DKART Inspector validation tests.

The final H-Cell products are two S-57 files, in Lat/Long NAD-83. The contents of these two H-Cell deliverables are listed in the table below:

TABLE 1 - Contents of H-Cell Files			
H12251_CS.000			**Scale 1:80,000**
Object Class Types	**Geographic**	**Cartographic**	**Meta**
S-57 Object Acronyms	DEPARE	$CSYMB	M_COVR
	SBDARE		M_QUAL
	SOUNDG		
	OFSPLF		
H12251_SS.000			**Scale 1:10,000**
Object Class Types	**Geographic**		
S-57 Object Acronyms	DEPCNT		
	SOUNDG		

B.2.4 Junctions and Prior Surveys

Survey H12251 (2010) junctions with survey H12069 (2009) to the south and H12121 (2010) to the south. Most present survey depths compare within 1 foot of junctioning survey depths to the south. Most present survey depths compare within 3 feet of the charted hydrography to the west and compare within 4 feet of the charted hydrography to the north and east.

B.4 DATA PROCESSING

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

CARIS Bathy DataBASE version 3.2/HF1
CARIS HIPS/SIPS version 7.0/SP2/HF8
CARIS S-57 Composer version 2.2/HF4
DKART Inspector version 5.1
HSTP Pydro version 11.7 (r3548)

C. HORIZONTAL AND VERTICAL CONTROL

The hydrographer makes adequate mention of horizontal and vertical control used for this survey in section C of the DR. The sounding datum for this survey is Mean Lower Low Water (MLLW), and the vertical datum is Mean High Water (MHW). Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 15 North.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

11356 (38th Edition, JUN/08)
Isles Dernieres to Point au Fer
Corrected through NM 07/30/2011
Corrected through LNM 07/19/2011
Scale 1:80,000

D.2 ADDITIONAL RESULTS

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section D and Appendix I and II of the DR. The hydrographer recommends that any charted features not specifically addressed either in the H-Cell files or the Blue Notes should be retained as charted. The following exception is noted:

- There is a charted well located at 28-51-36.962N, 90-51-34.569W that was not addressed by the field. During a review of the 200% SSS data, the well was determined disproved and the H12251_CS.000 file includes a bluenote ($CYSMB) for removal.

D.6 MISCELLANEOUS

Chart compilation was completed by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data will be forwarded to the Marine Chart Division in 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.7 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 files or the Blue Notes should be retained as charted. Refer to section D and Appendix I and II of the DR for further recommendations by the hydrographer.

APPROVAL SHEET
H12251

Initial Approvals:

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

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

Digitally signed by
Katrina Wyllie
Date: 2011.07.29
08:48:12 -04'00'

Katrina Wyllie
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.

Richard T. Brennan
2011.07.29 14:55:47 -04'00'

Approved: _____
CDR Richard T. Brennan, NOAA
Chief, Atlantic Hydrographic Branch