

H12019

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic Survey

Field No. N/A

Registry No. H12019

LOCALITY

State Florida

General Locality Tampa Bay

Sublocality Entrance to Tampa Bay

2011

CHIEF OF PARTY

Mark J. McMann, NOAA

LIBRARY & ARCHIVES

DATE

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION HYDROGRAPHIC TITLE SHEET		REGISTRY No H12019
INSTRUCTIONS — The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.		FIELD No: N/A
State <u>Florida</u>		
General Locality <u>Tampa Bay</u>		
Sub-Locality <u>Entrance to Tampa Bay</u>		
Scale <u>1:20,000</u>		Date of Survey <u>8/19/2010 - 5/26/2011</u>
Instructions dated <u>3/5/2009</u>		Project No. <u>OPR-J417-NRT1-09</u>
Vessel <u>Launch S-3004</u>		
Chief of party <u>Mark J. McMann, NOAA</u>		
Surveyed by <u>NRT-1 Personnel</u>		
Soundings by <u>Odom CV200 SBES, Reson 8125 MBES</u>		
SAR by <u>Adam Argento</u>		Compilation by <u>Peter Holmberg</u>
Soundings compiled in <u>Feet</u>		
REMARKS: <u>All times are UTC. UTM Zone 17</u>		
<u>The purpose of this survey is to provide contemporary surveys to update National Ocean Service (NOS)</u>		
<u>nautical charts. All separates are filed with the hydrographic data. Revisions and end notes in red were</u>		
<u>generated during office processing. The processing branch concurs with all information and recommendations in</u>		
<u>the DR unless otherwise noted. Page numbering may be interrupted or non sequential.</u>		
<u>All pertinent records for this survey, including the Descriptive Report, are archived at the</u>		
<u>National Geophysical Data Center (NGDC) and can be retrieved via http://www.ngdc.noaa.gov/.</u>		

Descriptive Report to Accompany Survey H12019

Project: OPR-J417-NRT1-09

Locality: Tampa Bay, FL

Sublocality: Entrance to Tampa Bay

Scale: 1:20,000

August 2010 - May 2011

Navigation Response Team 1

Chief of Party: Mark J McMann

A Area Surveyed

Entrance to Tampa Bay

A.1 Survey Limits

Data was acquired within the following survey limits:

Northwest Limit	Southeast Limit
27.6355555556 N 82.6652777778 W	27.5780555556 N 82.7422222222 W

Table 1: Survey Limits

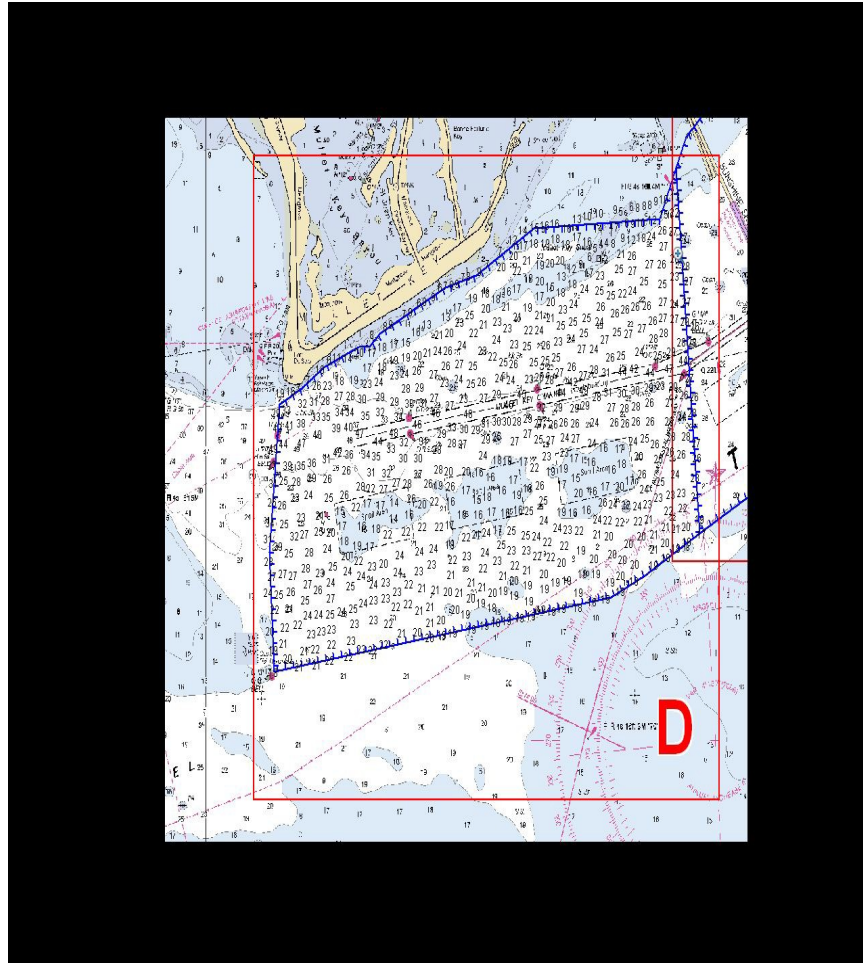


Figure 1: Sheet D

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

A.2 Survey Purpose

The intent of this survey is to supersede all bathymetry, seafloor features, and bottom characteristics within the assigned survey area.

A.3 Survey Quality

The entire survey is adequate to supersede previous data.

A.4 Survey Coverage

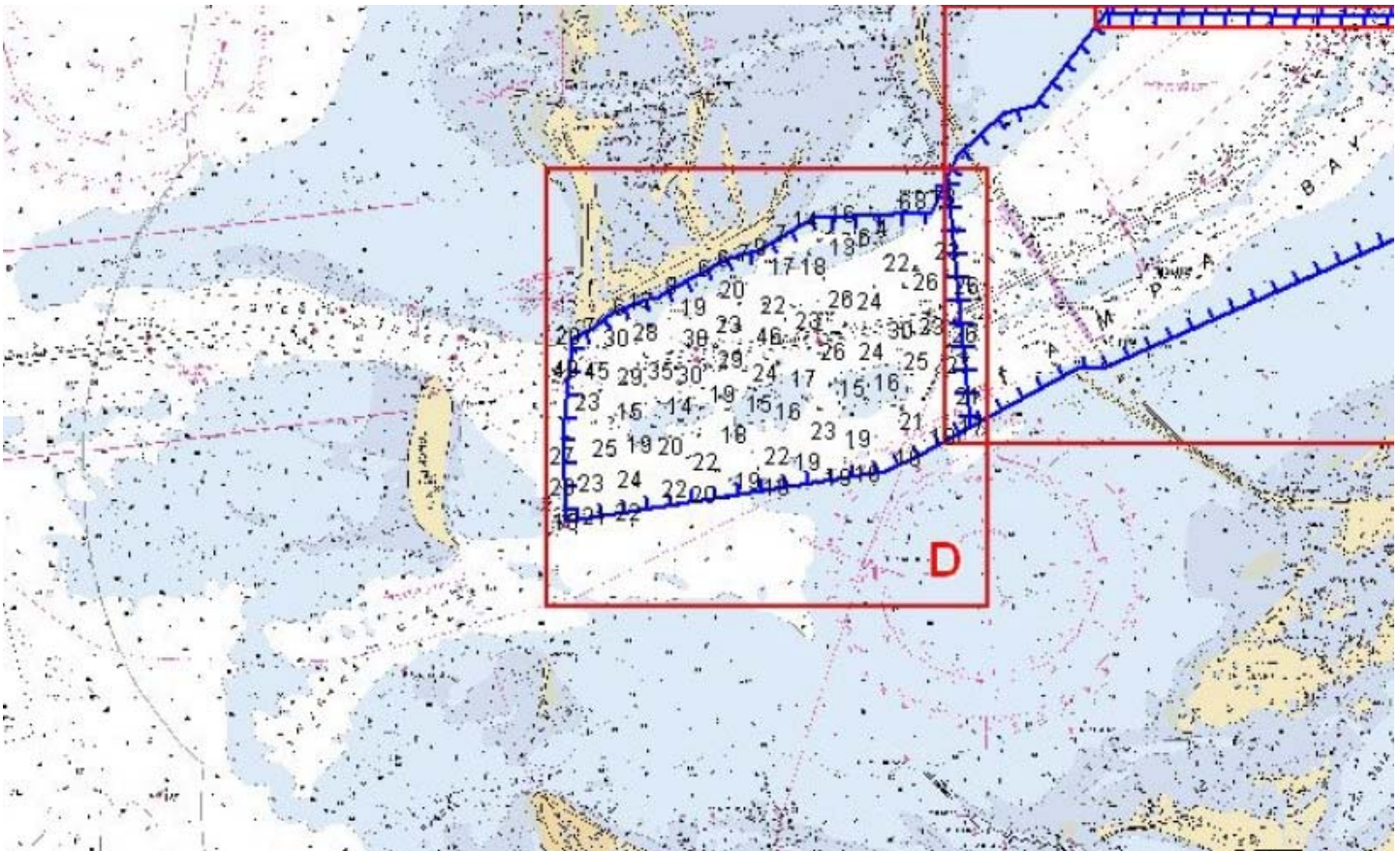


Figure 2: Sheet D coverage

Survey Coverage was in accordance with the requirements in the Project Instructions and the HSSD.

A.5 Survey Statistics

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

	HULL ID	<i>S3004</i>	<i>Total</i>
	SBES/MBES Combo Mainscheme	0	0
	SBES/SSS Combo Mainscheme	347.3	0
	MBES/SSS Combo Mainscheme	0	0
	SBES/MBES Combo Crosslines	17.9	17.9
	Lidar Crosslines	0	0
Number of Bottom Samples			5
Number of DPs			5
Number of Items Items Investigated by Dive Ops			0
Total Number of SNM			8.0

Table 2: Hydrographic Survey Statistics

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

<i>Survey Dates</i>
08/19/2010
05/26/2011

Table 3: Dates of Hydrography

Percentage of XL is calculated on 100% SSS coverage which is 50% of total mileage. XL is SBES only.¹

A.6 Shoreline

Shoreline was investigated in accordance with the Project Instructions and the HSSD.

A.7 Bottom Samples

Bottom Samples were acquired in accordance with the Project Instructions or the HSSD.²

B Data Acquisition and Processing

B.1 Equipment and Vessels

Refer to the 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 discussed in the following sections.

B.1.1 Vessels

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

Hull ID	<i>S3004</i>
LOA	9.15 meters
Draft	0.5 meters

Table 4: Vessels Used

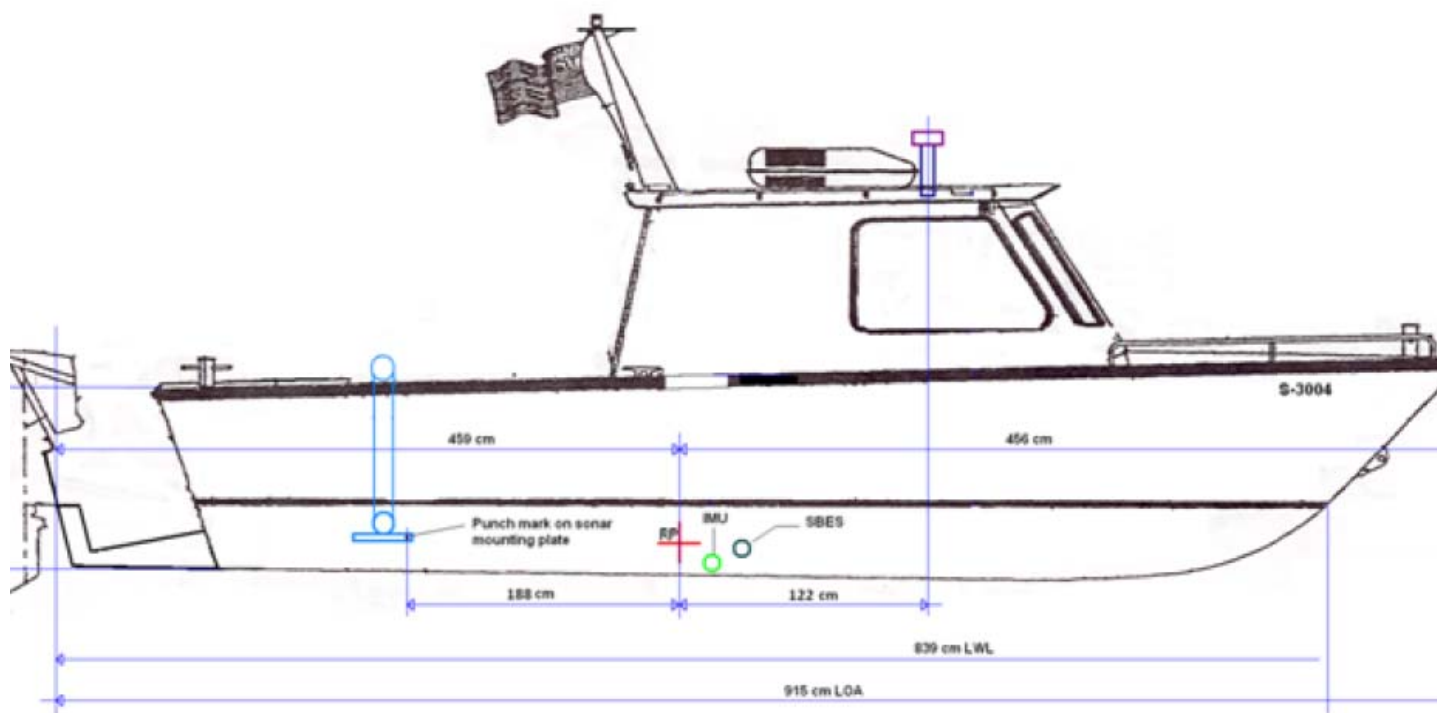


Figure 3: Launch 3004

B.1.2 Equipment

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

Manufacturer	Model	Type
Klein	5000	SSS
Odom	CV200	SBES
Reson	8125	MBES
Applanix	POS-MV	Vessel Attitude System
Trimble	DSM 132	Positioning System
Odom	Digibar	Sound Speed System

Table 5: Major Systems Used

B.2 Quality Control

B.2.1 Crosslines

Crossline agreement was excellent throughout the survey area.

B.2.2 Uncertainty

Uncertainty values for the SBES Base surface and the MBES Cube surfaces were within IHO specs.

B.2.3 Junctions

The following junctions were made with this survey:

Registry Number	Scale	Year	Field Unit	Relative Location
H12018	1:20,000	2011	Navigation Response Team 1	E

Table 6: Junctioning Surveys

H12018

Sounding agreement between the H12018 and H12019 is excellent, with depths agreeing within 1-2 feet.

B.2.4 Sonar QC Checks

Sonar system quality control checks were conducted as detailed in the quality control section of the DAPR.

B.2.5 Sound Speed Methods

Sound Speed Cast Frequency: Casts were performed daily for SSS and periodically during MBES data collection days.

B.2.6 Coverage Equipment and Methods

All Equipment and survey methods were used as detailed in the DAPR.

B.3 Echo Sounding Corrections

B.3.1 Corrections to Echo Sounding

All Data reductions procedures conform to those detailed in the DAPR.

B.3.2 Calibrations

All sounding systems were calibrated as detailed in the DAPR.

B.3.3 Velocity Cast numbering

When multiple velocity casts were performed in a single day, Velocity over wrote the position of the second cast with the position of the first cast. This made all cast taken in a single day plot in the same position in PYDRO. The original position of the cast is correct in the raw data. This did not affect the quality of the data.

B.4 Backscatter

Backscatter was not collected for this survey.

B.5 Data Processing

B.5 Software Updates

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

The following Feature Object Catalog was used: S-57 in Pydro

B.5.1 Surfaces

SSS mosaics are at 1 meter resolution. The SBES base surface has a 5 meter resolution. The MBES Cube surface has a 50 centimeter resolution. The SSS and SBES grids cover the entire survey area. The MBES Cube covers only item investigations.³

C Vertical and Horizontal Control

Additional information discussing the vertical or horizontal control for this survey can be found in the accompanying HVCR.

C.1 Vertical Control

The vertical datum for this project is Mean lower low water.

Standard Vertical Control Methods Used:

Discrete Zoning
TCARI

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

Station Name	Station ID
McKay Bay	872-6667
Old Port Tampa	872-6607
Port Mantee	872-6384
St Petersburg	872-6520

Table 8: NWLON Tide Stations

File Name	Status
J417NRT12011.tc	Verified Observed
8726667.tid	Verified Observed
8726607.tid	Verified Observed
8726520.tid	Verified Observed
8726384.tid	Verified Observed
J417NRT12010CORP.zdf	Verified Observed

Table 9: Water Level Files (.tid)

There was no Tide Corrector file associated with this survey.

A request for final approved tides was sent to N/OPS1 on 05/04/2011. The final tide note was received on 05/18/2011.⁴

In 2010 Discrete Zoning was used for application of Water Level correction. In 2011 TCARI zoning was applied.

C.2 Horizontal Control

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

The following DGPS Stations were used for horizontal control:

DGPS Stations
Tampa

Table 10: USCG DGPS Stations

D Results and Recommendations

D.1 Chart Comparison

D.1.1 Raster Charts

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

Chart	Scale	Edition	Edition Date	LNМ Date	NM Date
11415	1:40,000	8	08/2006	05/03/2011	05/21/2011
11416	1:80,000	10	10/2008	05/03/2011	05/21/2011

Table 11: Largest Scale Raster Charts

11415

Current survey soundings are in excellent agreement with charted soundings with the current survey being 1-2 feet deeper. Charted spoil areas are 2-4 feet deeper than charted.

11416

Comparison to chart 11416 not performed.

D.1.2 Electronic Navigational Charts

The following are the largest scale ENC's, which cover the survey area:

ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US5FL12M	1:80000	46	01/18/2011	05/03/2011	NO
US5FL11M	1:80000	31	01/11/2011	03/21/2011	NO

Table 12: Largest Scale ENC's

US5FL12M

Comparison to ENC US5FL12M not performed.

US5FL11M

Comparison to ENC US5FL11M not performed.

D.1.3 AWOIS Items

Number of AWOIS Items Addressed: 5⁵

Number of AWOIS Items Not Addressed: 0

All assigned AWOIS items investigated with 200% SSS. Items which produced significant SSS contacts were developed with MB. See the AWOIS report in the Appendices for all recommendations.

D.1.4 Charted Features⁶

D.1.5 Uncharted Features

Sixteen features were investigated and are addressed in the Survey Features Report in the appendices.⁷

D.1.6 Dangers to Navigation

No DTONs were found within H12019.

D.1.7 Shoal and Hazardous Features

None

D.1.8 Channels

Survey depths met or exceeded tabulated Channel Depths from the USACE.

D.2 Additional Results**D.2.1 Shoreline**

None

D.2.2 Prior Surveys

None⁸

D.2.3 Aids to Navigation

A charted "W Bn" at Lat. 27 37 28.9N, Lon. 82 41 06.4W was found to be in ruins with just the piles remaining. A detached position was obtained on the feature and it is addressed in the Survey Features Report.

D.2.4 Overhead Features

No overhead features are located within the boundary of H12019

D.2.5 Submarine Features

A charted pipeline through the southeast portion of the survey area was seen on SSS records and in several places is 2-3 feet shoaler than the surrounding area. The pipeline is charted adequately.

D.2.6 Ferry Routes and Terminals

None

D.2.7 Platforms

None

D.2.8 Significant Features

None

D.2.9 Construction and Dredging

None


E Approval Sheet

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

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

The survey data meets or exceeds requirements as set forth in the NOS Hydrographic Surveys and Specifications Deliverables Manual, Field Procedures Manual, Standing and Letter Instructions, and all HSD Technical Directives. These data are adequate to supersede charted data in their common areas. This survey is complete and no additional work is required with the exception of deficiencies noted in the Descriptive Report.

Approver Name	Approver Title	Approval Date	Signature
Mark J McMann	Chief of Party	07/25/2011	



Digitally signed by
Mark J. McMann
DN: cn=Mark J.
McMann, o=NRT-1,
ou=NSD, email=Mark.
McMann@noaa.gov,
c=US
Date: 2011.07.25
10:51:35 -05'00'

Revisions Compiled During Office Processing and Evaluation

¹ Percentage of cross lines relative to main scheme hydrography is unknown.

² Five bottom samples were collected and are recommended to update charted bottom types. Chart per H12019_CS.000.

³ A 4m base surface was created for compilation from combining the shoal layer of SBES surface and the depth layer of the MBES surface.

⁴ Tide note is appended to this report.

⁵ Six AWOIS items were assigned for full investigation and all are addressed in the appended feature report. Additionally one assigned 'information only' AWOIS item # 10320 was disproved with 200% side scan and 100% multibeam.

Charted features within the boundary of H12019 are addressed by blue notes and/or recommendations for charting the NINFOM fields of the features in H12019_CS.000.

⁷ Feature report is appended to this report.

⁸ Prior surveys have been acquired in the area, however no comparisons were performed.

H12019 Survey Features Report

Registry Number: H12019
State: Florida
Locality: Tampa Bay
Sub-locality: Entrance to Tampa Bay
Project Number: OPR-J417-NRT1-11
Survey Dates: 03/14/2011 - 04/21/2011

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11411	17th	03/01/2008	1:40,000 (11411_1)	USCG LNM: 03/25/2008 (05/05/2009) NGA NTM: 11/06/1999 (05/09/2009)
11415	8th	08/01/2006	1:40,000 (11415_1)	USCG LNM: 09/23/2008 (05/05/2009) NGA NTM: 04/10/2004 (05/09/2009)
11416	10th	10/01/2008	1:40,000 (11416_1)	USCG LNM: 04/07/2009 (05/05/2009) NGA NTM: 04/10/2004 (05/09/2009)
11412	44th	06/01/2006	1:80,000 (11412_1)	USCG LNM: 03/10/2009 (05/05/2009) NGA NTM: 04/10/2004 (05/09/2009)
11400	36th	01/01/2006	1:456,394 (11400_1)	[L]NTM: ?
1114A	36th	01/01/2006	1:456,394 (1114A_1)	[L]NTM: ?
1113A	28th	07/01/2005	1:470,940 (1113A_1)	[L]NTM: ?
11420	28th	07/01/2005	1:470,940 (11420_1)	[L]NTM: ?
11451	33rd	09/01/2007	1:495,362 (11451_17)	[L]NTM: ?
11006	32nd	08/01/2005	1:875,000 (11006_1)	[L]NTM: ?
11013	47th	02/01/2008	1:1,200,000 (11013_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	Previously Charted Obstruction 24ft. AWOIS 10318	AWOIS	7.54 m	27° 36' 28.6" N	082° 40' 17.3" W	---
1.2	Previously Charted Obstruction 24ft. AWOIS 10321	AWOIS	7.84 m	27° 36' 21.0" N	082° 42' 06.8" W	---
1.3	Previously Charted Obstruction 23ft. AWOIS 10322	AWOIS	7.62 m	27° 36' 40.2" N	082° 42' 34.4" W	---

1.4	AWOIS 10323 OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
1.5	Previously Charted Wreck 20ft. AWOIS 9833	AWOIS	6.84 m	27° 35' 54.9" N	082° 40' 50.0" W	---
1.6	Previously Charted White Beacon	GP	[None]	27° 37' 29.6" N	082° 41' 06.0" W	---
1.7	Previously Charted Obstruction 24ft. AWOIS 10318	Obstruction	7.54 m	27° 36' 28.6" N	082° 40' 17.3" W	10318
1.8	Previously Charted Wreck 20ft. AWOIS 9833	Wreck	6.84 m	27° 35' 54.9" N	082° 40' 50.0" W	9833
1.9	Previously Charted Pipeline	Shoal	6.36 m	27° 35' 44.1" N	082° 40' 37.7" W	---
1.10	Previously Charted Obstruction 24ft. AWOIS 10321	Obstruction	7.84 m	27° 36' 21.0" N	082° 42' 06.8" W	10321
1.11	Previously Charted Obstruction 23ft. AWOIS 10322	Obstruction	7.62 m	27° 36' 40.2" N	082° 42' 34.4" W	10322
1.12	Bottom Sample 1	Shoal	[None]	27° 35' 47.6" N	082° 40' 07.5" W	---
1.13	Bottom Sample 2	Shoal	[None]	27° 35' 34.6" N	082° 41' 21.6" W	---
1.14	Bottom Sample 3	Shoal	[None]	27° 35' 35.4" N	082° 42' 35.5" W	---
1.15	Bottom Sample 4	Shoal	[None]	27° 36' 30.5" N	082° 44' 01.6" W	---
1.16	Bottom Sample 5	Shoal	[None]	27° 36' 51.9" N	082° 41' 55.4" W	---
2.1	AWOIS 10319 OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
2.2	Uncharted Pile	Shoal	4.25 m	27° 36' 50.9" N	082° 43' 35.4" W	---
2.3	Uncharted Obstruction 2	Obstruction	4.84 m	27° 37' 00.4" N	082° 43' 05.7" W	---
2.4	Uncharted Obstruction 1	Obstruction	4.01 m	27° 37' 03.9" N	082° 42' 48.1" W	---
2.5	Uncharted Wreck 1	Wreck	3.33 m	27° 37' 40.8" N	082° 41' 17.0" W	---
2.6	Uncharted Obstruction 3	Shoal	4.62 m	27° 36' 56.9" N	082° 43' 01.0" W	---
2.7	Uncharted Obstruction 4	Obstruction	5.14 m	27° 37' 02.8" N	082° 42' 60.0" W	---

1 - Charted Features

1.1) AWOIS #10318 - AWOIS 10318 OBSTRUCTION

Primary Survey Feature is Profile/Beam - 480/110 from h12019 / s3004_reson8125 / 2011-103 / 2011_103_mb000_1331

Search Position: 27° 36' 28.7" N, 082° 40' 17.2" W
Historical Depth: 7.32 m
Search Radius: 50
Search Technique: MB, S2, ES
Technique Notes: [None]

History Notes:

HISTORY

H-10598/95--OPR-J343-MI; SIDE SCAN SONAR AND DIVER INVESTIGATION REVEALED A 24 FT LONG METAL CYLINDRICAL TANK ON ITS SIDE , 6 FT HIGH. LEAST DEPTH WAS 24 FT.

Survey Summary

Survey Position: 27° 36' 28.6" N, 082° 40' 17.3" W
Least Depth: 7.54 m (= 24.74 ft = 4.123 fm = 4 fm 0.74 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.969 m ; TVU (TPEv) ± 0.269 m
Timestamp: 2011-103.13:31:52.833 (04/13/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-103 / 2011_103_mb000_1331
Profile/Beam: 480/110
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact detected in 200% SSS on previously charted obstruction. Contact was investigated using MBES. Least depth agrees with charted depth.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-103/2011_103_mb000_1331	480/110	0.00	000.0	Primary
h12019/s3004_klein5000_200/2010-285/tb101012160900	0001	1.08	175.8	Secondary
h12019/s3004_klein5000_100/2010-252/tb100909160200	0001	2.11	246.2	Secondary
AWOIS H12019	AWOIS # 10318	3.04	205.3	Secondary

Hydrographer Recommendations

Hydrographer recommends retaining as charted.

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: HORACC - 1.97 m
QUASOU - 6:least depth known
SORIND - US,US,Survey,H12019
TECSOU - 3:found by multi-beam
VALSOU - 7.540 m
VERACC - .27 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Feature Images

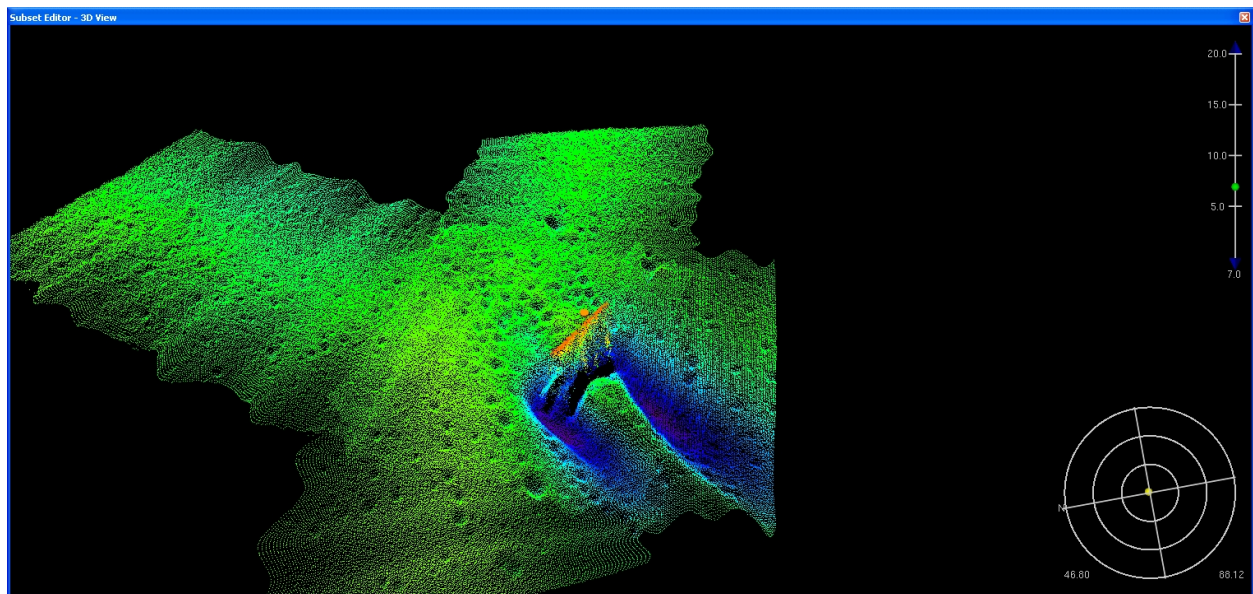


Figure 1.1.1

1.2) AWOIS #10321 - AWOIS 10321 OBSTRUCTION

Primary Survey Feature is Profile/Beam - 326/46 from h12019 / s3004_reson8125 / 2011-103 / 2011_103_mb000_1433

Search Position: 27° 36' 20.9" N, 082° 42' 06.8" W
Historical Depth: 7.32 m
Search Radius: 50
Search Technique: MB, S2, ES
Technique Notes: [None]

History Notes:

HISTORY

H-10598/95--OPR-J343-MI; SIDE SCAN SONAR AND DIVER INVESTIGATION REVEALED 24 FT LONG METAL TANK, 5.5 FT IN DIAM. LEAST DEPTH WAS 24 FT.

Survey Summary

Survey Position: 27° 36' 21.0" N, 082° 42' 06.8" W
Least Depth: 7.84 m (= 25.71 ft = 4.285 fm = 4 fm 1.71 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.973 m ; TVU (TPEv) ± 0.288 m
Timestamp: 2011-103.14:33:54.219 (04/13/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-103 / 2011_103_mb000_1433
Profile/Beam: 326/46
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact was detected in 200% SSS coverage and investigated with MBES. Charted Obstruction least depth is deeper than currently charted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-103/2011_103_mb000_1433	326/46	0.00	000.0	Primary
AWOIS H12019	AWOIS # 10321	1.99	359.0	Secondary
h12019/s3004_klein5000_200/2010-285/tb101012143400	0002	4.55	091.7	Secondary

Hydrographer Recommendations

Hydrographer recommends updating least depth to reflect current survey data.

Cartographically-Rounded Depth (Affected Charts):

25ft (11411_1, 11415_1, 11416_1, 11412_1, 11451_17)

4 ¼fm (1114A_1, 11400_1, 1113A_1, 11420_1, 11006_1, 11013_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: HORACC - 1.97 m

QUASOU - 6:least depth known

SORDAT - 20110527

SORIND - US,US,Survey,H12019

TECSOU - 3:found by multi-beam

VALSOU - 7.836 m

VERACC - .27 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Feature Images

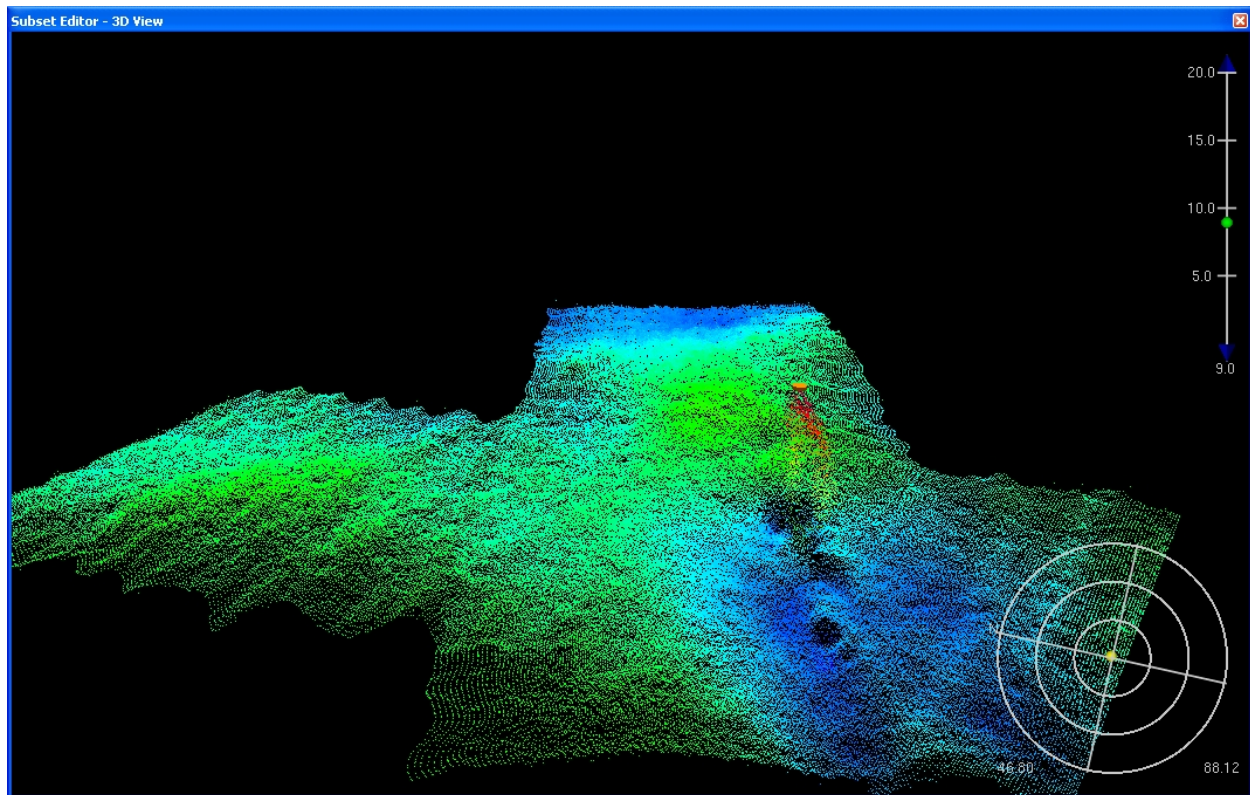


Figure 1.2.1

1.3) AWOIS #10322 - AWOIS 10322 OBSTRUCTION

**Primary Survey Feature is Profile/Beam - 352/116 from h12019 /
s3004_reson8125 / 2011-111 / _000_1511a**

Search Position: 27° 36' 40.3" N, 082° 42' 33.3" W
Historical Depth: 7.01 m
Search Radius: 50
Search Technique: MB, S2, ES
Technique Notes: [None]

History Notes:

HISTORY

H-10598/95--OPR-J343-MI; SIDE SCAN SONAR AND DIVER INVESTIGATION REVEALED A 45 FT LONG METAL PIPE, 3 FT IN DIAM., RESTING HORIZONTALLY ON THE BOTTOM. LEAST DEPTH WAS 23 FT.

Survey Summary

Survey Position: 27° 36' 40.2" N, 082° 42' 34.4" W
Least Depth: 7.62 m (= 25.00 ft = 4.167 fm = 4 fm 1.00 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.969 m ; TVU (TPEv) ± 0.268 m
Timestamp: 2011-111.15:11:34.135 (04/21/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-111 / _000_1511a
Profile/Beam: 352/116
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact was detected within AWOIS 10322 radius in 200% SSS coverage and investigated with MBES. Least depth disagrees with charted depth.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-111/_000_1511a	352/116	0.00	000.0	Primary
h12019/s3004_klein5000_200/2010-280/tb101007152100	0002	7.96	270.6	Secondary
AWOIS H12019	AWOIS # 10322	29.67	262.4	Secondary

Hydrographer Recommendations

Hydrographer recommends modifying charted depth on current Obstruction.

Cartographically-Rounded Depth (Affected Charts):

25ft (11411_1, 11415_1, 11416_1, 11412_1, 11451_17)

4fm (1114A_1, 11400_1, 1113A_1, 11420_1, 11006_1, 11013_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20110527

SORIND - US,US,Survey,H12019

TECSOU - 3:found by multi-beam

VALSOU - 7.620 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Feature Images

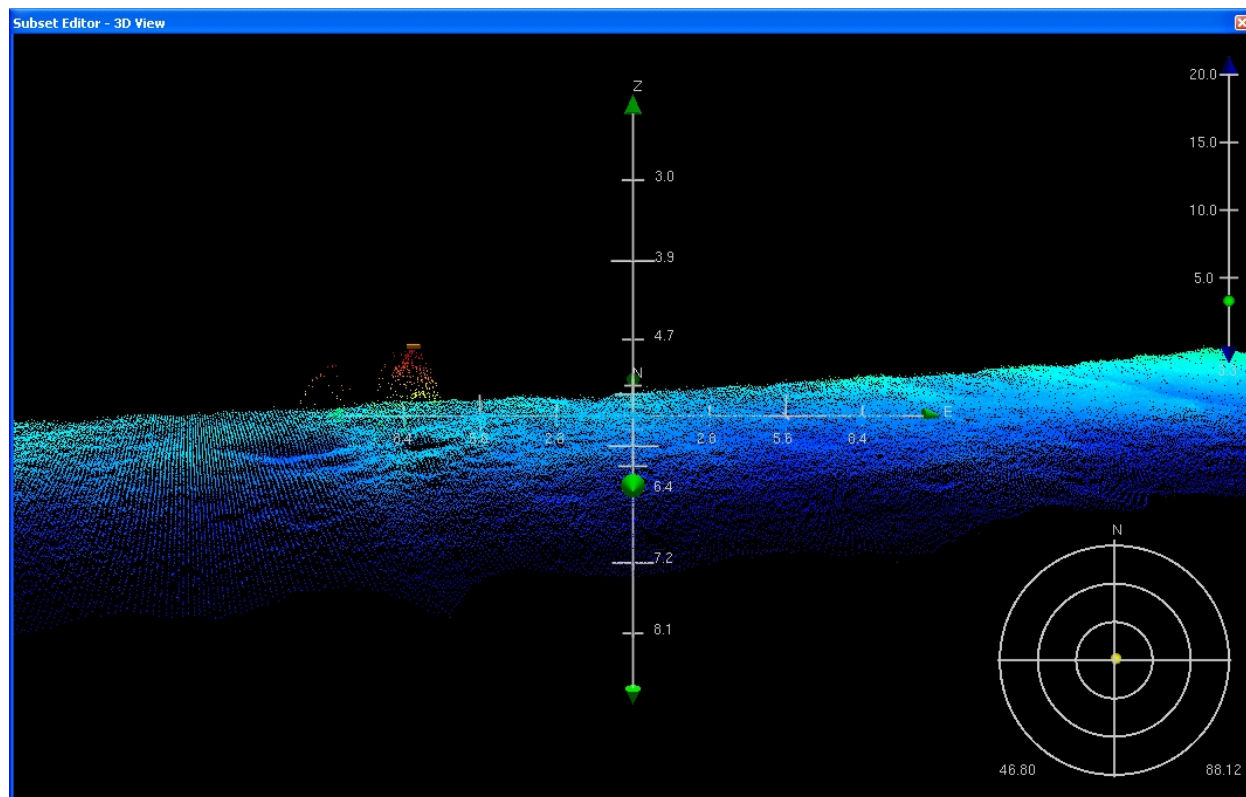


Figure 1.3.1

1.4) AWOIS #10323 - AWOIS 10323 OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 27° 36' 47.1" N, 082° 43' 04.5" W
Historical Depth: 6.10 m
Search Radius: 50
Search Technique: MB, S2, ES
Technique Notes: [None]

History Notes:

HISTORY

H-10598/95--OPR-J343-MI; SIDE SCAN SONAR AND DIVER INVESTIGATION REVEALED A 20 FT SQUARE CONCRETE SLAB, ONE FOOT HIGH. LEAST DEPTH WAS 20 FT.

Survey Summary

Charts Affected: 11411_1, 11415_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

AWOIS 10323 was not detected in 200% SSS coverage is considered to be disproven. No S-57 Attribution due to disproval of existence.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS H12019	AWOIS # 10323	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends removing AWOIS 10323, charted Obstruction from chart.

S-57 Data

[None]

1.5) AWOIS #9833 - AWOIS 9833 Wreck

Primary Survey Feature is Profile/Beam - 448/87 from h12019 / s3004_reson8125 / 2011-103 / 2011_103_mb000_1345

Search Position: 27° 35' 54.9" N, 082° 40' 49.9" W
Historical Depth: 6.10 m
Search Radius: 50
Search Technique: MB, S2, ES
Technique Notes: [None]

History Notes:

HISTORY

H10598/95--OPR-J343-MI; SUNKEN WRECK DISCOVERED AND DESCRIBED BY DIVERS TO BE A 19 FT LONG METAL HULLED VESSEL SIMILAR TO A ALUMINUM SEA ARK, 7 FT WIDE. LEAST DEPTH ON THE WRECK WAS 20 FT IN POS. LAT.27-35-54.88N, LONG.82-40-49.93W. ENTERED 9/96 MCR

Survey Summary

Survey Position: 27° 35' 54.9" N, 082° 40' 50.0" W
Least Depth: 6.84 m (= 22.45 ft = 3.742 fm = 3 fm 4.45 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.968 m ; TVU (TPEv) ± 0.270 m
Timestamp: 2011-103.13:46:16.202 (04/13/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-103 / 2011_103_mb000_1345
Profile/Beam: 448/87
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact was detected in 200% SSS coverage and investigated using MBES. Least depth is shoaler than charted depth.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-103/2011_103_mb000_1345	448/87	0.00	000.0	Primary
AWOIS H12019	AWOIS # 9833	2.04	266.4	Secondary

h12019/s3004_klein5000_200/2010-286/tb101013161100	0001	3.73	097.4	Secondary
h12019/s3004_klein5000_100/2010-256/tb100913160100	0001	6.38	127.9	Secondary
h12019/s3004_klein5000_100/2010-256/tb100913163900	0001	8.97	027.2	Secondary

Hydrographer Recommendations

Hydrographer recommends updating depth to reflect current survey least depth.

Cartographically-Rounded Depth (Affected Charts):

22ft (11411_1, 11415_1, 11416_1, 11412_1, 11451_17)

3 ¾fm (1114A_1, 11400_1, 1113A_1, 11420_1, 11006_1, 11013_1, 411_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 1:non-dangerous wreck
 HORACC - 1.97 m
 QUASOU - 6:least depth known
 SORDAT - 20110527
 SORIND - US,US,Survey,H12019
 TECSOU - 3:found by multi-beam
 VALSOU - 6.844 m
 VERACC - .27 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Feature Images

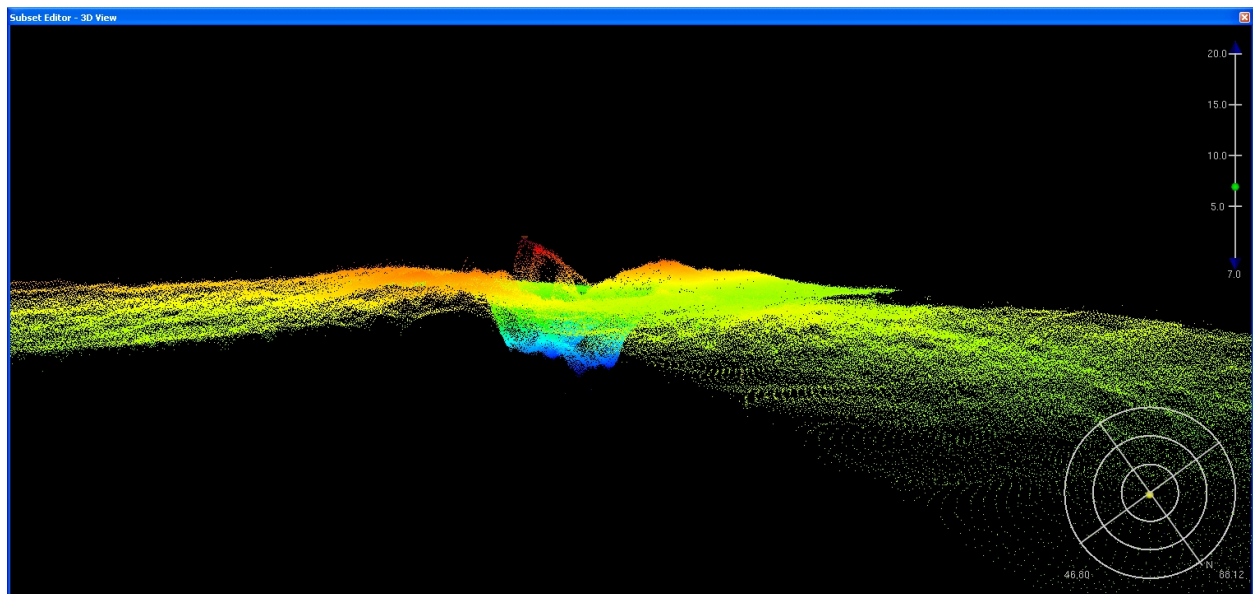


Figure 1.5.1

1.6) Previously Charted White Beacon

Survey Summary

Survey Position: 27° 37' 29.6" N, 082° 41' 06.0" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2011-073.08:40:55 (03/14/2011)
GP Dataset: ChartGPs - Digitized
GP No.: 2
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

White Beacon in ruins. Only the three piles of the currently ruined beacon are present. Field party estimates a 1.5m above the water line for each of the piles. S-57 was categorized as a "Beacon, Isolated danger" due to assumed warning for Mullet Key Shoal.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	2	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends charting beacon ruins at current survey location.

S-57 Data

Geo object 1: Beacon, isolated danger (BCNISD)
Attributes: BCNSHP - 5:pile beacon
 COLOUR - 1:white
 CONDTN - 2:ruined
 CONRAD - 2:not radar conspicuous
 SORDAT - 20110527
 SORIND - US,US,Survey,H12019
 VERDAT - 12:Mean lower low water
Geo object 2: Pile (PILPNT)

Attributes: CATPLE - 3:post
CONDTN - 2:ruined
CONVIS - 1:visual conspicuous
HEIGHT - 1.5 m
INFORM - Three piles left as ruins of previously charted W Bn
SORDAT - 20110527
SORIND - US,US,Survey,H12019

Feature Images



Figure 1.6.1



Figure 1.6.2

1.7) Previously Charted Obstruction 24ft. AWOIS 10318

Primary Feature for AWOIS Item #10318

Search Position: 27° 36' 28.7" N, 082° 40' 17.2" W
Historical Depth: 7.32 m
Search Radius: 50
Search Technique: MB, S2, ES
Technique Notes: [None]

History Notes:

HISTORY

H-10598/95--OPR-J343-MI; SIDE SCAN SONAR AND DIVER INVESTIGATION REVEALED A 24 FT LONG METAL CYLINDRICAL TANK ON ITS SIDE , 6 FT HIGH. LEAST DEPTH WAS 24 FT.

Survey Summary

Survey Position: 27° 36' 28.6" N, 082° 40' 17.3" W
Least Depth: 7.54 m (= 24.74 ft = 4.123 fm = 4 fm 0.74 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.969 m ; TVU (TPEv) ± 0.269 m
Timestamp: 2011-103.13:31:52.833 (04/13/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-103 / 2011_103_mb000_1331
Profile/Beam: 480/110
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact detected in 200% SSS on previously charted obstruction. Contact was investigated using MBES. Least depth agrees with charted depth.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-103/2011_103_mb000_1331	480/110	0.00	000.0	Primary
h12019/s3004_klein5000_200/2010-285/tb101012160900	0001	1.08	175.8	Secondary
h12019/s3004_klein5000_100/2010-252/tb100909160200	0001	2.11	246.2	Secondary
AWOIS H12019	AWOIS # 10318	3.04	205.3	Secondary

Hydrographer Recommendations

Hydrographer recommends retaining as charted.

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: HORACC - 1.97 m
QUASOU - 6:least depth known
SORIND - US,US,Survey,H12019
TECSOU - 3:found by multi-beam
VALSOU - 7.540 m
VERACC - .27 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Feature Images

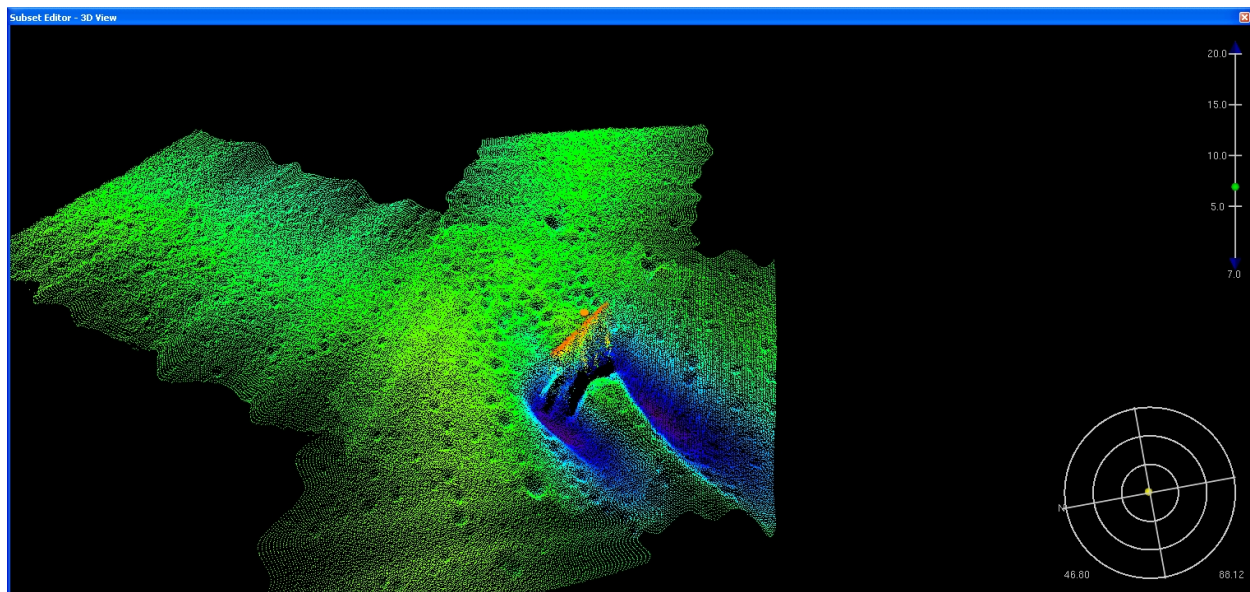


Figure 1.7.1

1.8) Previously Charted Wreck 20ft. AWOIS 9833

Primary Feature for AWOIS Item #9833

Search Position: 27° 35' 54.9" N, 082° 40' 49.9" W
Historical Depth: 6.10 m
Search Radius: 50
Search Technique: MB, S2, ES
Technique Notes: [None]

History Notes:

HISTORY

H10598/95--OPR-J343-MI; SUNKEN WRECK DISCOVERED AND DESCRIBED ì
 BY DIVERS TO BE A 19 FT LONG METAL HULLED VESSEL SIMILAR TO A ì
 ALUMINUM SEA ARK, 7 FT WIDE. LEAST DEPTH ON THE WRECK WAS 20 FT ì
 IN POS. LAT.27-35-54.88N, LONG.82-40-49.93W. ENTERED 9/96 MCR

Survey Summary

Survey Position: 27° 35' 54.9" N, 082° 40' 50.0" W
Least Depth: 6.84 m (= 22.45 ft = 3.742 fm = 3 fm 4.45 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.968 m ; TVU (TPEv) ± 0.270 m
Timestamp: 2011-103.13:46:16.202 (04/13/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-103 / 2011_103_mb000_1345
Profile/Beam: 448/87
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact was detected in 200% SSS coverage and investigated using MBES. Least depth is shoaler than charted depth.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-103/2011_103_mb000_1345	448/87	0.00	000.0	Primary
AWOIS H12019	AWOIS # 9833	2.04	266.4	Secondary
h12019/s3004_klein5000_200/2010-286/tb101013161100	0001	3.73	097.4	Secondary

h12019/s3004_klein5000_100/2010-256/tb100913160100	0001	6.38	127.9	Secondary
h12019/s3004_klein5000_100/2010-256/tb100913163900	0001	8.97	027.2	Secondary

Hydrographer Recommendations

Hydrographer recommends updating depth to reflect current survey least depth.

Cartographically-Rounded Depth (Affected Charts):

22ft (11411_1, 11415_1, 11416_1, 11412_1, 11451_17)

3 ¾fm (1114A_1, 11400_1, 1113A_1, 11420_1, 11006_1, 11013_1, 411_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 1:non-dangerous wreck
 HORACC - 1.97 m
 QUASOU - 6:least depth known
 SORDAT - 20110527
 SORIND - US,US,Survey,H12019
 TECSOU - 3:found by multi-beam
 VALSOU - 6.844 m
 VERACC - .27 m
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Feature Images

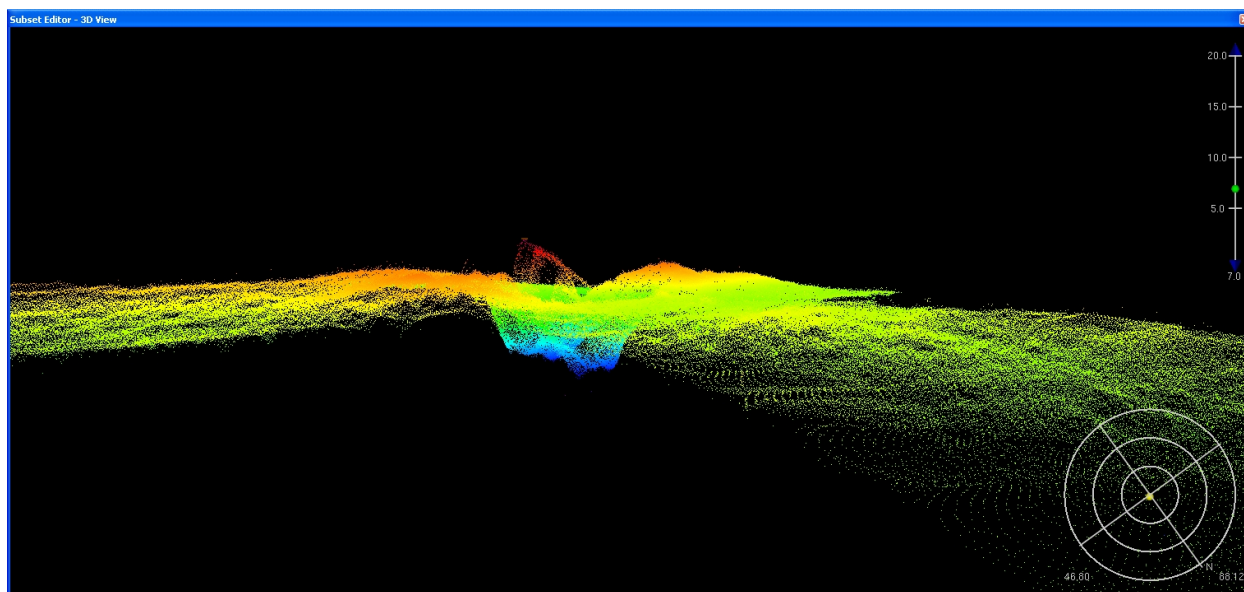


Figure 1.8.1

1.9) Previously Charted Pipeline

Survey Summary

Survey Position: 27° 35' 44.1" N, 082° 40' 37.7" W
Least Depth: 6.36 m (= 20.87 ft = 3.478 fm = 3 fm 2.87 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 1.966 m ; **TVU (TPEv)** ± 0.268 m
Timestamp: 2011-103.13:49:41.079 (04/13/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-103 / 2011_103_mb000_1349
Profile/Beam: 438/131
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact detected in 200% SSS coverage and investigated with MBES. Least was found to be insignificant.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-103/2011_103_mb000_1349	438/131	0.00	000.0	Primary
h12019/s3004_klein5000_200/2010-287/tb101014132700	0001	2.18	101.2	Secondary

Hydrographer Recommendations

Hydrographer recommends retaining as charted.

S-57 Data

Geo object 1: Pipeline, submarine/on land (PIPSOL)
Attributes: HORACC - 1.97 m
 SORIND - US,US,Survey,H12019
 VERACC - 0.27 m

Feature Images

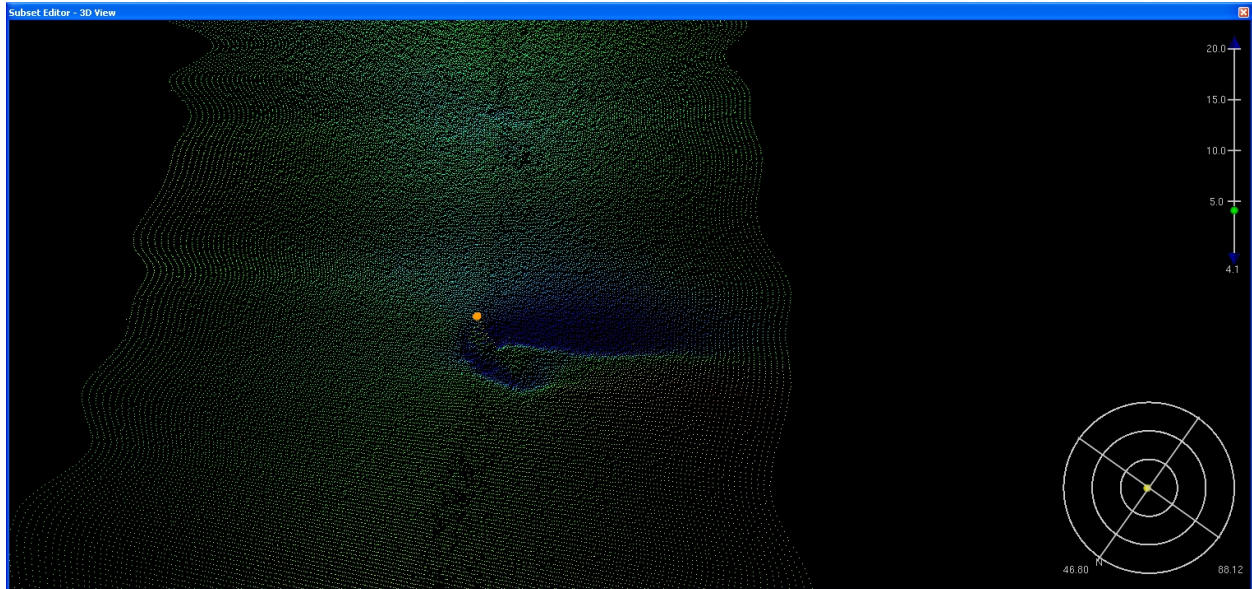


Figure 1.9.1

1.10) Previously Charted Obstruction 24ft. AWOIS 10321

Primary Feature for AWOIS Item #10321

Search Position: 27° 36' 20.9" N, 082° 42' 06.8" W
Historical Depth: 7.32 m
Search Radius: 50
Search Technique: MB, S2, ES
Technique Notes: [None]

History Notes:

HISTORY

H-10598/95--OPR-J343-MI; SIDE SCAN SONAR AND DIVER INVESTIGATION REVEALED 24 FT LONG METAL TANK, 5.5 FT IN DIAM. LEAST DEPTH WAS 24 FT.

Survey Summary

Survey Position: 27° 36' 21.0" N, 082° 42' 06.8" W
Least Depth: 7.84 m (= 25.71 ft = 4.285 fm = 4 fm 1.71 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 1.973 m ; **TVU (TPEv)** ± 0.288 m
Timestamp: 2011-103.14:33:54.219 (04/13/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-103 / 2011_103_mb000_1433
Profile/Beam: 326/46
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact was detected in 200% SSS coverage and investigated with MBES. Charted Obstruction least depth is deeper than currently charted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-103/2011_103_mb000_1433	326/46	0.00	000.0	Primary
AWOIS H12019	AWOIS # 10321	1.99	359.0	Secondary
h12019/s3004_klein5000_200/2010-285/tb101012143400	0002	4.55	091.7	Secondary

Hydrographer Recommendations

Hydrographer recommends updating least depth to reflect current survey data.

Cartographically-Rounded Depth (Affected Charts):

25ft (11411_1, 11415_1, 11416_1, 11412_1, 11451_17)

4 ¼fm (1114A_1, 11400_1, 1113A_1, 11420_1, 11006_1, 11013_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: HORACC - 1.97 m

QUASOU - 6:least depth known

SORDAT - 20110527

SORIND - US,US,Survey,H12019

TECSOU - 3:found by multi-beam

VALSOU - 7.836 m

VERACC - .27 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Feature Images

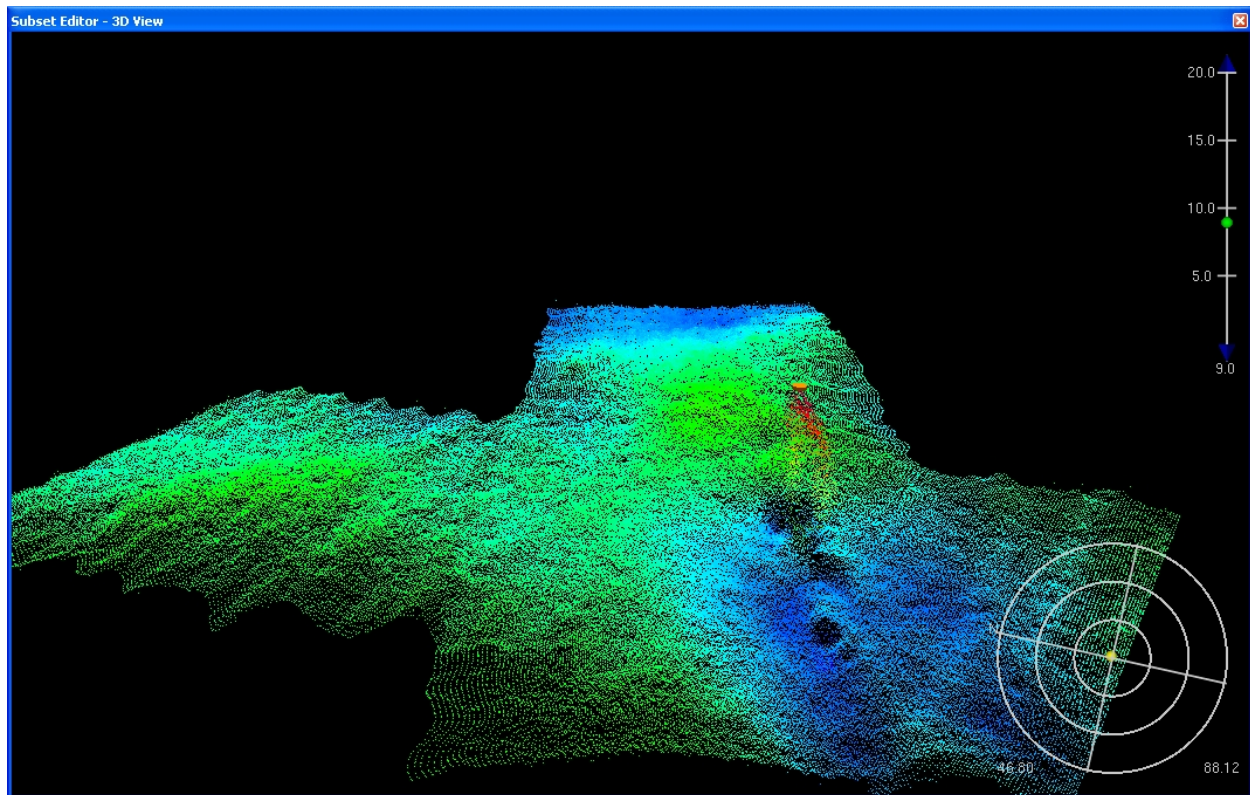


Figure 1.10.1

1.11) Previously Charted Obstruction 23ft. AWOIS 10322

Primary Feature for AWOIS Item #10322

Search Position: 27° 36' 40.3" N, 082° 42' 33.3" W
Historical Depth: 7.01 m
Search Radius: 50
Search Technique: MB, S2, ES
Technique Notes: [None]

History Notes:

HISTORY

H-10598/95--OPR-J343-MI; SIDE SCAN SONAR AND DIVER INVESTIGATION REVEALED A 45 FT LONG METAL PIPE, 3 FT IN DIAM., RESTING HORIZONTALLY ON THE BOTTOM. LEAST DEPTH WAS 23 FT.

Survey Summary

Survey Position: 27° 36' 40.2" N, 082° 42' 34.4" W
Least Depth: 7.62 m (= 25.00 ft = 4.167 fm = 4 fm 1.00 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.969 m ; TVU (TPEv) ± 0.268 m
Timestamp: 2011-111.15:11:34.135 (04/21/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-111 / _000_1511a
Profile/Beam: 352/116
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact was detected within AWOIS 10322 radius in 200% SSS coverage and investigated with MBES. Least depth disagrees with charted depth.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-111/_000_1511a	352/116	0.00	000.0	Primary
h12019/s3004_klein5000_200/2010-280/tb101007152100	0002	7.96	270.6	Secondary
AWOIS H12019	AWOIS # 10322	29.67	262.4	Secondary

Hydrographer Recommendations

Hydrographer recommends modifying charted depth on current Obstruction.

Cartographically-Rounded Depth (Affected Charts):

25ft (11411_1, 11415_1, 11416_1, 11412_1, 11451_17)

4fm (1114A_1, 11400_1, 1113A_1, 11420_1, 11006_1, 11013_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
SORDAT - 20110527
SORIND - US,US,Survey,H12019
TECSOU - 3:found by multi-beam
VALSOU - 7.620 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Feature Images

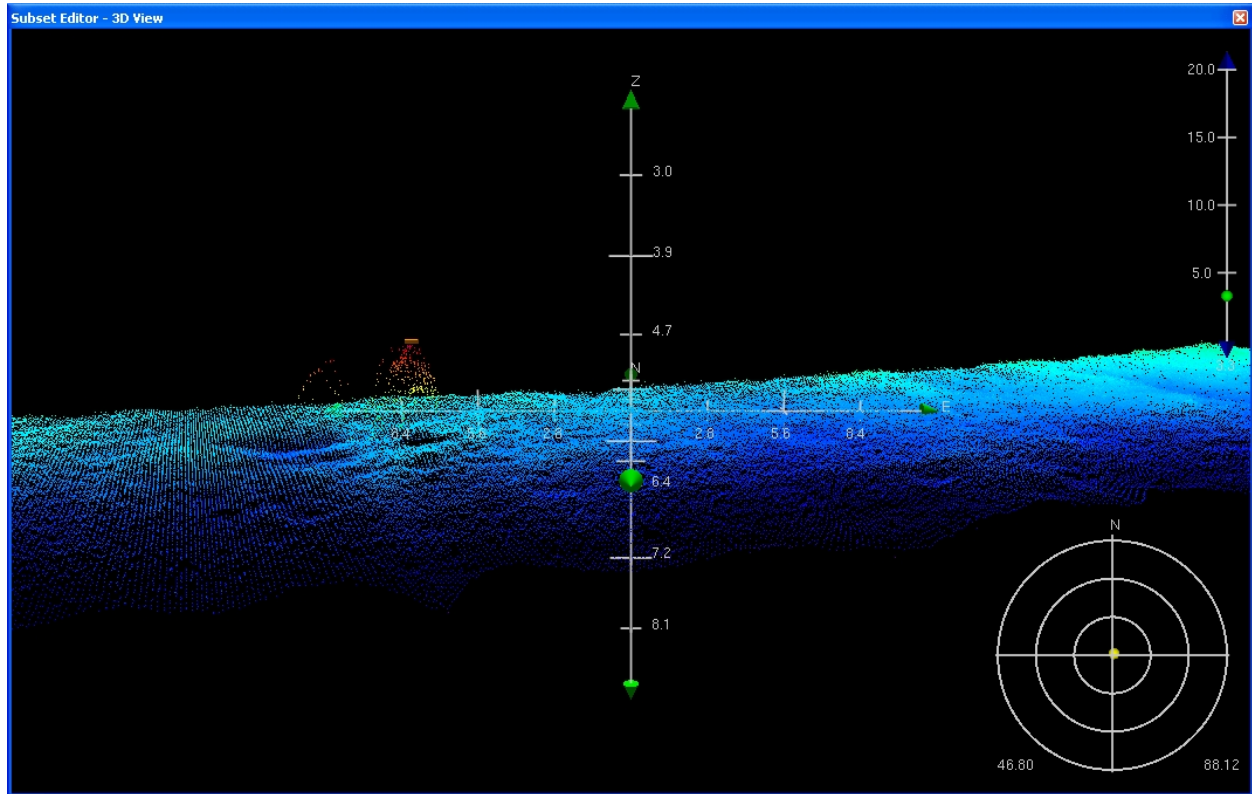


Figure 1.11.1

1.12) Bottom Sample 1

Survey Summary

Survey Position: 27° 35' 47.6" N, 082° 40' 07.5" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2011-081.14:56:08.000 (03/22/2011)
DP Dataset: vesselconfig / s3004_nonechosounder_dp / 2011-081 / 03222011
Profile/Beam: 1/1
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

f S, brk Sh

Feature Correlation

Address	Feature	Range	Azimuth	Status
vesselconfig/s3004_nonechosounder_dp/2011-081/03222011	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends modifying bottom type classification to match current survey.

S-57 Data

Geo object 1: Seabed area (SBDARE)
Attributes: NATQUA - 1,4:fine,broken
 NATSUR - 4,17:sand,shells
 SORDAT - 20110527
 SORIND - US,US,Survey,H12019
 WATLEV - 3:always under water/submerged

1.13) Bottom Sample 2

Survey Summary

Survey Position: 27° 35' 34.6" N, 082° 41' 21.6" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2011-081.15:04:03.000 (03/22/2011)
DP Dataset: vesselconfig / s3004_nonechosounder_dp / 2011-081 / 03222011
Profile/Beam: 2/1
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

f S, brk Sh

Feature Correlation

Address	Feature	Range	Azimuth	Status
vesselconfig/s3004_nonechosounder_dp/2011-081/03222011	2/1	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends modifying bottom type classification to match current survey.

S-57 Data

Geo object 1: Seabed area (SBDARE)
Attributes: NATQUA - 1,4:fine,broken
 NATSUR - 4,17:sand,shells
 SORDAT - 20110527
 SORIND - US,US,Survey,H12019
 WATLEV - 3:always under water/submerged

1.14) Bottom Sample 3

Survey Summary

Survey Position: 27° 35' 35.4" N, 082° 42' 35.5" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2011-081.15:10:30.000 (03/22/2011)
DP Dataset: vesselconfig / s3004_nonechosounder_dp / 2011-081 / 03222011
Profile/Beam: 3/1
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

brk Sh

Feature Correlation

Address	Feature	Range	Azimuth	Status
vesselconfig/s3004_nonechosounder_dp/2011-081/03222011	3/1	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends modifying bottom type classification to match current survey.

S-57 Data

Geo object 1: Seabed area (SBDARE)
Attributes: NATQUA - 4:broken
 NATSUR - 17:shells
 SORDAT - 20110527
 SORIND - US,US,Survey,H12019
 WATLEV - 3:always under water/submerged

1.15) Bottom Sample 4

Survey Summary

Survey Position: 27° 36' 30.5" N, 082° 44' 01.6" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2011-081.15:18:33.000 (03/22/2011)
DP Dataset: vesselconfig / s3004_nonechosounder_dp / 2011-081 / 03222011
Profile/Beam: 4/1
Charts Affected: 11411_1, 11415_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

bk Sh

Feature Correlation

Address	Feature	Range	Azimuth	Status
vesselconfig/s3004_nonechosounder_dp/2011-081/03222011	4/1	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends modifying bottom type classification to match current survey.

S-57 Data

Geo object 1: Seabed area (SBDARE)
Attributes: NATQUA - 4:broken
 NATSUR - 17:shells
 SORDAT - 20110527
 SORIND - US,US,Survey,H12019
 WATLEV - 3:always under water/submerged

1.16) Bottom Sample 5

Survey Summary

Survey Position: 27° 36' 51.9" N, 082° 41' 55.4" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2011-081.15:30:46.000 (03/22/2011)
DP Dataset: vesselconfig / s3004_nonechosounder_dp / 2011-081 / 03222011
Profile/Beam: 5/1
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

f S, bk Sh

Feature Correlation

Address	Feature	Range	Azimuth	Status
vesselconfig/s3004_nonechosounder_dp/2011-081/03222011	5/1	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends modifying bottom type classification to match current survey.

S-57 Data

Geo object 1: Seabed area (SBDARE)
Attributes: NATQUA - 1,4:fine,broken
 NATSUR - 4,17:sand,shells
 SORDAT - 20110527
 SORIND - US,US,Survey,H12019
 WATLEV - 3:always under water/submerged

2 - New Features

2.1) AWOIS #10319 - AWOIS 10319 OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 27° 36' 16.7" N, 082° 40' 17.2" W
Historical Depth: 4.27 m
Search Radius: 50
Search Technique: MB, S2, ES
Technique Notes: [None]

History Notes:

HISTORY

H-10598/95--OPR-J343-MI; SIDE SCAN SONAR AND DIVER INVESTIGATION REVEALED A 9.5 FT X 16 FT SQUARE CONCRETE (OR METAL) BLOCK, 7 FT HIGH. LEAST DEPTH WAS 14 FT.

Survey Summary

Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

AWOIS 10319 was not detected in 200% SSS coverage and is considered to be disproven. No S-57 Attribution due to disproval of existence.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS H12019	AWOIS # 10319	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends charting current survey soundings.

S-57 Data

[None]

2.2) Uncharted Pile

Survey Summary

Survey Position: 27° 36' 50.9" N, 082° 43' 35.4" W
Least Depth: 4.25 m (= 13.93 ft = 2.322 fm = 2 fm 1.93 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 1.963 m ; **TVU (TPEv)** ± 0.268 m
Timestamp: 2011-103.15:54:17.347 (04/13/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-103 / 2011_103_mb000_1553
Profile/Beam: 547/161
Charts Affected: 11411_1, 11415_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact detected in 200% SSS coverage and investigated with MBES. Contact height was determined to be significant.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-103/2011_103_mb000_1553	547/161	0.00	000.0	Primary
h12019/s3004_klein5000_100/2010-252/tb100909124400	0002	0.11	057.8	Secondary
h12019/s3004_klein5000_100/2010-231/tb100819161400	0001	3.75	108.7	Secondary

Hydrographer Recommendations

Hydrographer recommends charting a pile at current survey location.

Cartographically-Rounded Depth (Affected Charts):

14ft (11411_1, 11415_1, 11412_1, 11451_17)

2 ¼fm (1114A_1, 11400_1, 1113A_1, 11420_1, 11006_1, 11013_1, 411_1)

S-57 Data

Geo object 1: Pile (PILPNT)
Attributes: CATPLE - 3:post
 CONDTN - 2:ruined
 HORACC - 1.96 m
 SORDAT - 20110527

SORIND - US,US,Survey,H12019

VERACC - .27 m

Feature Images

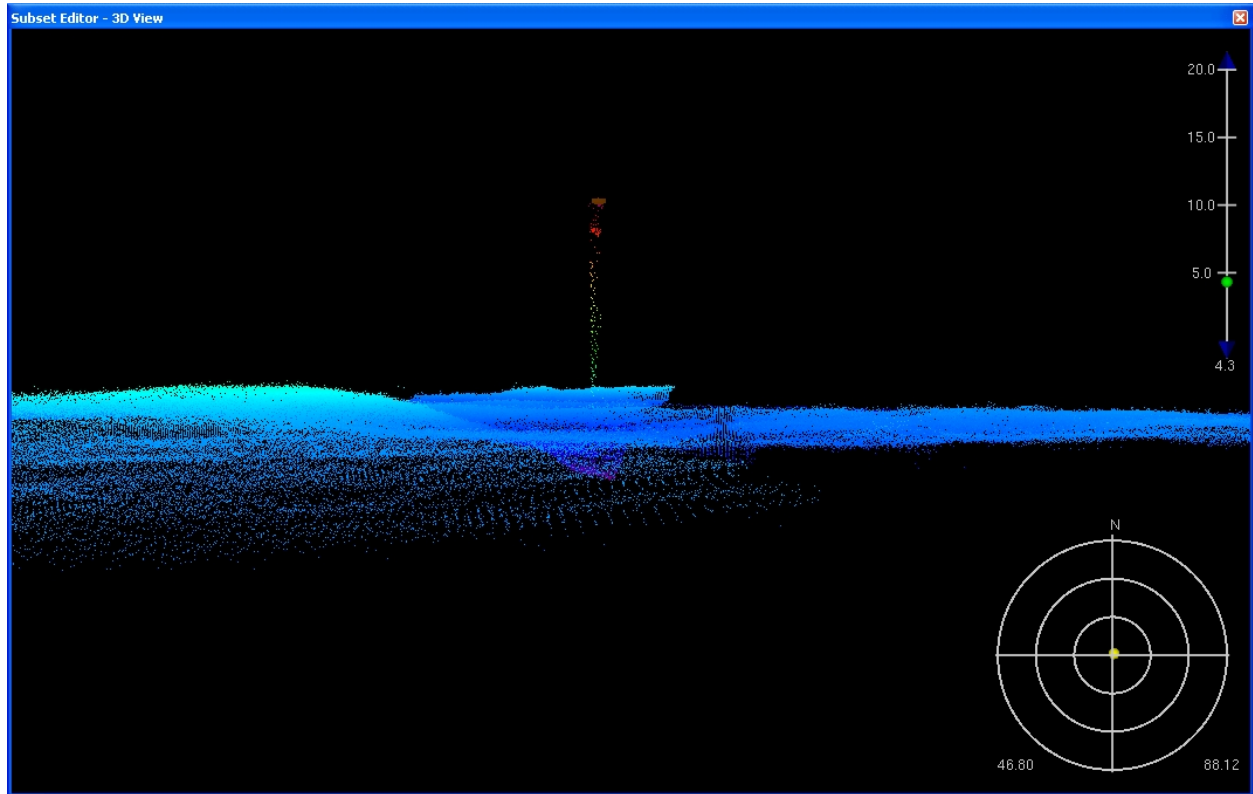


Figure 2.2.1

2.3) Uncharted Obstruction 2

Survey Summary

Survey Position: 27° 37' 00.4" N, 082° 43' 05.7" W
Least Depth: 4.84 m (= 15.88 ft = 2.647 fm = 2 fm 3.88 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.964 m ; TVU (TPEv) ± 0.268 m
Timestamp: 2011-104.13:54:33.228 (04/14/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-104 / _000_1354a
Profile/Beam: 382/89
Charts Affected: 11411_1, 11415_1, 11412_1, 1114A_1, 11400_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact detected in 200% SSS coverage and investigated using MBES. Contact least depth was determined to be significant.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-104/_000_1354a	382/89	0.00	000.0	Primary
h12019/s3004_klein5000_200/2010-271/tb100928152100	0003	4.23	175.2	Secondary
h12019/s3004_klein5000_100/2010-231/tb100819152500	0002	25.05	241.2	Secondary
h12019/s3004_klein5000_200/2010-271/tb100928152100	0001	30.62	251.1	Secondary
h12019/s3004_klein5000_100/2010-231/tb100819154800	0001	37.38	260.0	Secondary

Hydrographer Recommendations

Hydrographer recommends charting Obstruction at current survey location.

Cartographically-Rounded Depth (Affected Charts):

16ft (11411_1, 11415_1, 11412_1, 11451_17)

2 ½fm (1114A_1, 11400_1, 11006_1, 11013_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: HORACC - 1.96 m
 QUASOU - 6:least depth known

SORDAT - 20110527

SORIND - US,US,Survey,H12019

TECSOU - 3:found by multi-beam

VALSOU - 4.840 m

VERACC - .27 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Feature Images

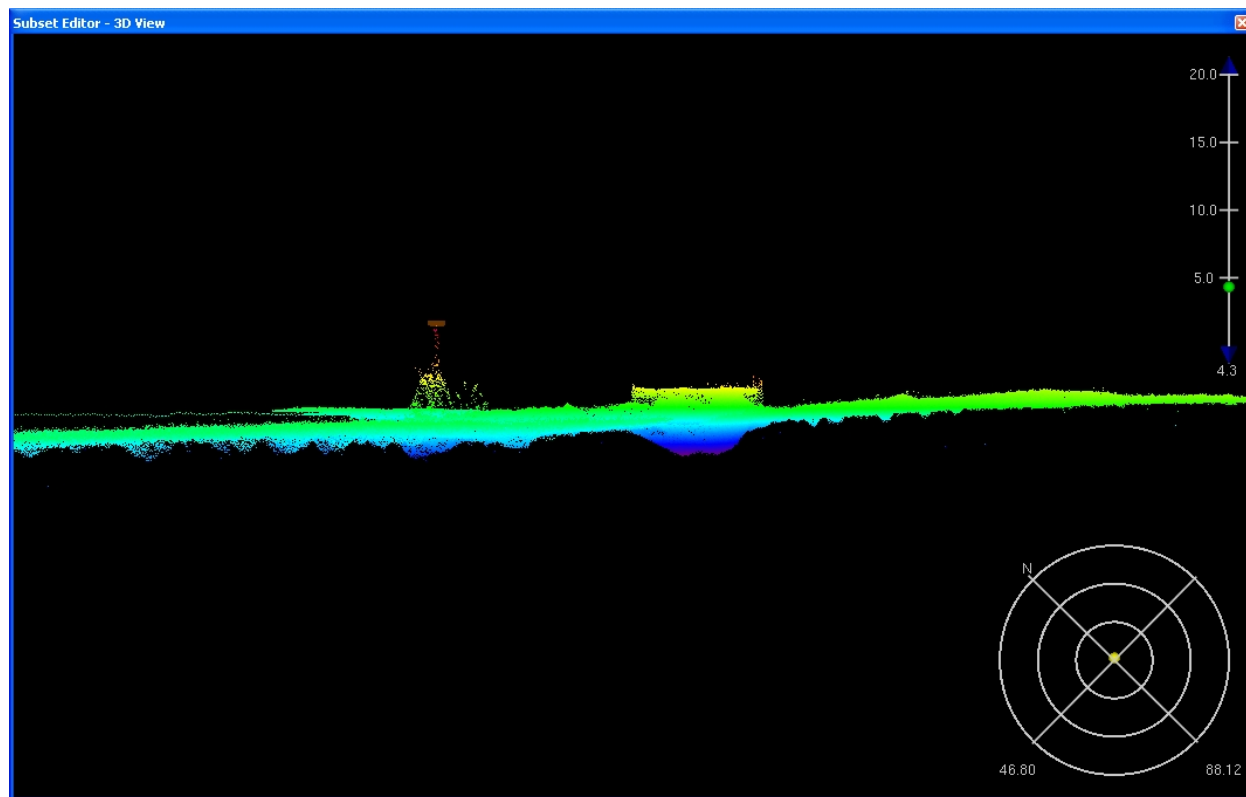


Figure 2.3.1

2.4) Uncharted Obstruction 1

Survey Summary

Survey Position: 27° 37' 03.9" N, 082° 42' 48.1" W
Least Depth: 4.01 m (= 13.16 ft = 2.193 fm = 2 fm 1.16 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 1.965 m ; **TVU (TPEv)** ± 0.282 m
Timestamp: 2011-104.14:02:02.677 (04/14/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-104 / _000_1401a
Profile/Beam: 436/15
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact detected in 200% SSS coverage and investigated using MBES. Contact least depth was determined to be significant.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-104/_000_1401a	436/15	0.00	000.0	Primary
h12019/s3004_klein5000_100/2010-231/tb100819152500	0001	0.61	254.6	Secondary
h12019/s3004_klein5000_200/2010-271/tb100928152100	0004	1.88	279.7	Secondary

Hydrographer Recommendations

Hydrographer recommends charting Obstrn at current survey position.

Cartographically-Rounded Depth (Affected Charts):

13ft (11411_1, 11415_1, 11416_1, 11412_1, 11451_17)

2 ¼fm (1114A_1, 11400_1, 11006_1, 11013_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: HORACC - 1.97 m
 QUASOU - 6:least depth known
 SORDAT - 20110527
 SORIND - US,US,Survey,H12019

TECSOU - 3:found by multi-beam

VALSOU - 4.010 m

VERACC - .28 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Feature Images

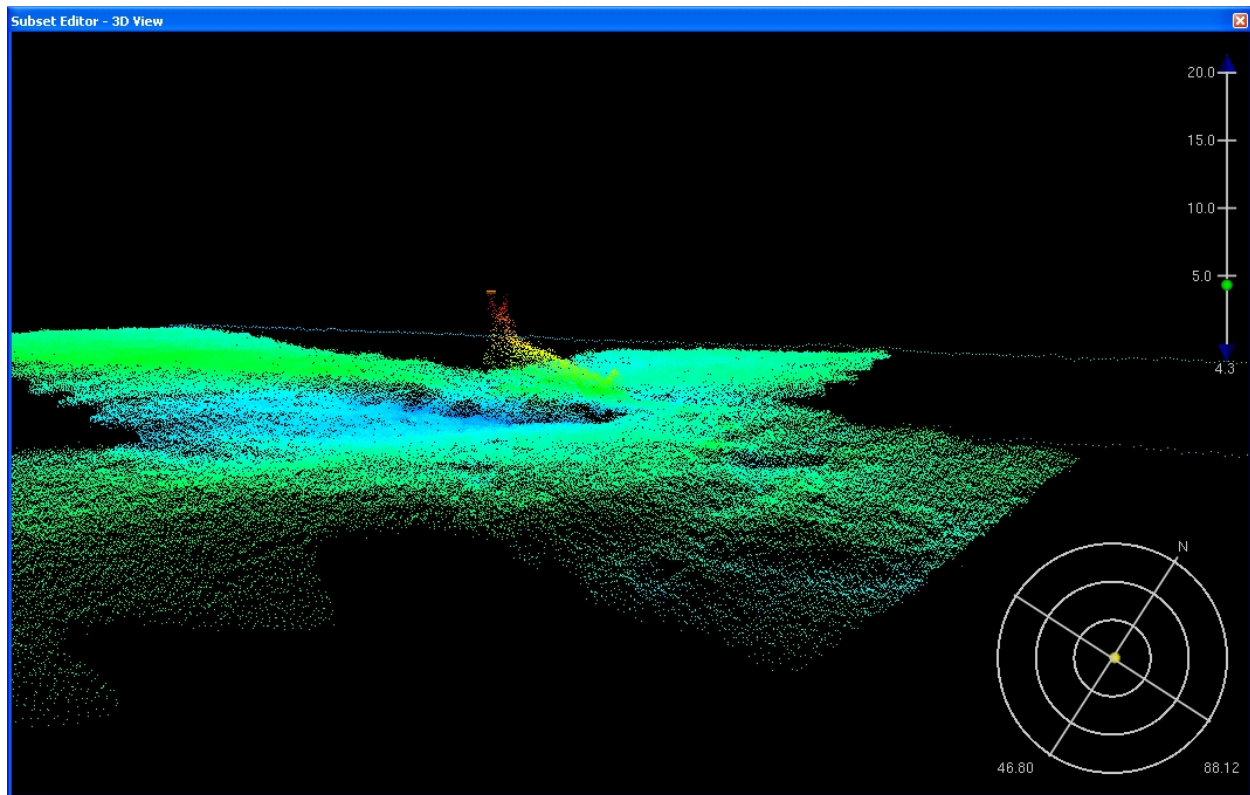


Figure 2.4.1

2.5) Uncharted Wreck 1

Survey Summary

Survey Position: 27° 37' 40.8" N, 082° 41' 17.0" W
Least Depth: 3.33 m (= 10.91 ft = 1.819 fm = 1 fm 4.91 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.964 m ; TVU (TPEv) ± 0.282 m
Timestamp: 2011-111.14:31:07.870 (04/21/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-111 / _000_1430
Profile/Beam: 526/4
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact detected in 200% SSS coverage and investigated using MBES. Contact was determined to be a wreck and least depth is significant.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-111/_000_1430	526/4	0.00	000.0	Primary
h12019/s3004_klein5000_200/2010-271/tb100928125800	0001	2.65	280.4	Secondary
h12019/s3004_klein5000_100/2010-231/tb100819130500	0002	5.98	070.6	Secondary

Hydrographer Recommendations

Hydrographer recommends charting Wreck at current survey location.

Cartographically-Rounded Depth (Affected Charts):

11ft (11411_1, 11415_1, 11416_1, 11412_1, 11451_17)

1 ¾fm (1114A_1, 11400_1, 11006_1, 11013_1, 411_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 1:non-dangerous wreck
 QUASOU - 6:least depth known
 SORDAT - 20110527
 SORIND - US,US,Survey,H12019

TECSOU - 3:found by multi-beam

VALSOU - 3.326 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Feature Images

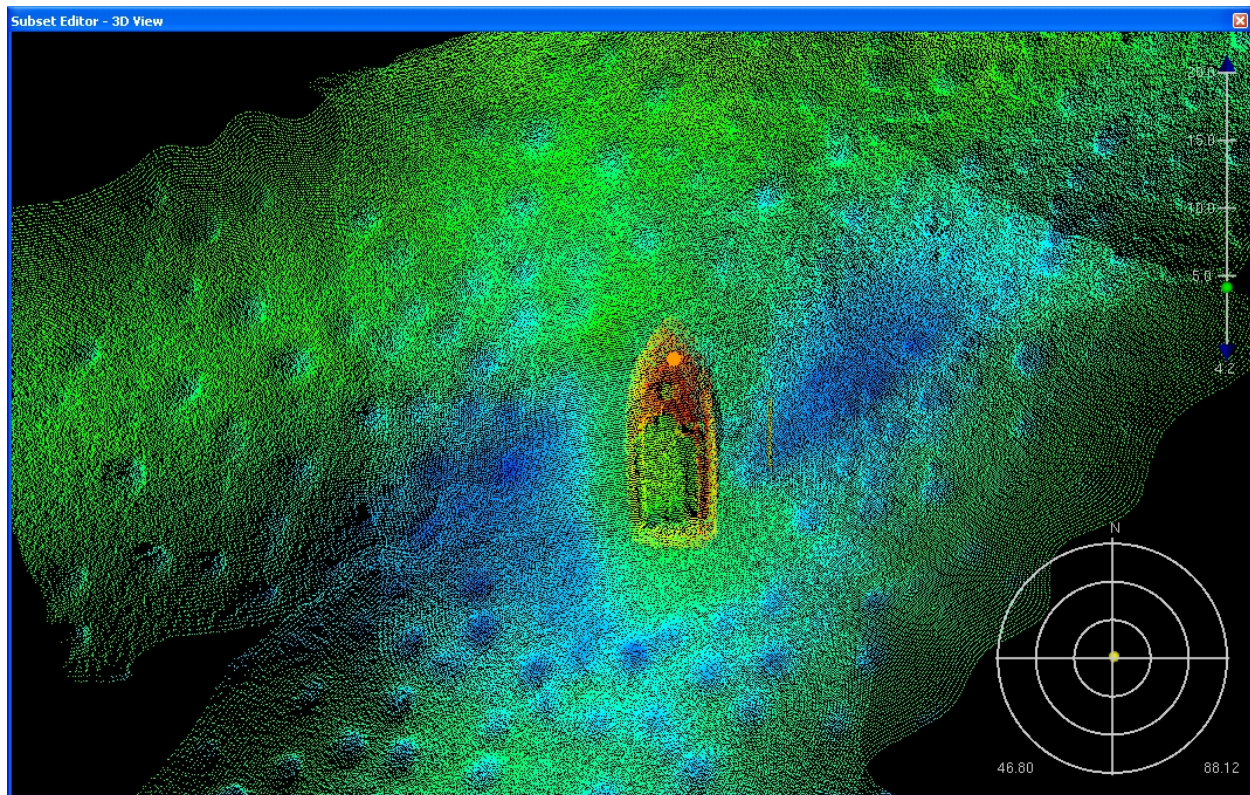


Figure 2.5.1

2.6) Uncharted Obstruction 3

Survey Summary

Survey Position: 27° 36' 56.9" N, 082° 43' 01.0" W
Least Depth: 4.62 m (= 15.15 ft = 2.525 fm = 2 fm 3.15 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.963 m ; TVU (TPEv) ± 0.267 m
Timestamp: 2011-111.15:05:23.222 (04/21/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-111 / _000_1504
Profile/Beam: 545/147
Charts Affected: 11411_1, 11415_1, 11412_1, 1114A_1, 11400_1, 1113A_1, 11420_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact was detected in 200% SSS coverage and was investigated using MBES. Contact least depth was determined to be significant.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-111/_000_1504	545/147	0.00	000.0	Primary
h12019/s3004_klein5000_100/2010-252/tb100909124400	0001	0.99	296.9	Secondary
h12019/s3004_klein5000_200/2010-271/tb100928161200	0001	1.40	314.1	Secondary

Hydrographer Recommendations

Hydrographer recommends charting Obstruciton at current survey location.

Cartographically-Rounded Depth (Affected Charts):

15ft (11411_1, 11415_1, 11412_1, 11451_17)

2 ½fm (1114A_1, 11400_1, 1113A_1, 11420_1, 11006_1, 11013_1, 411_1)

S-57 Data

[None]

Feature Images

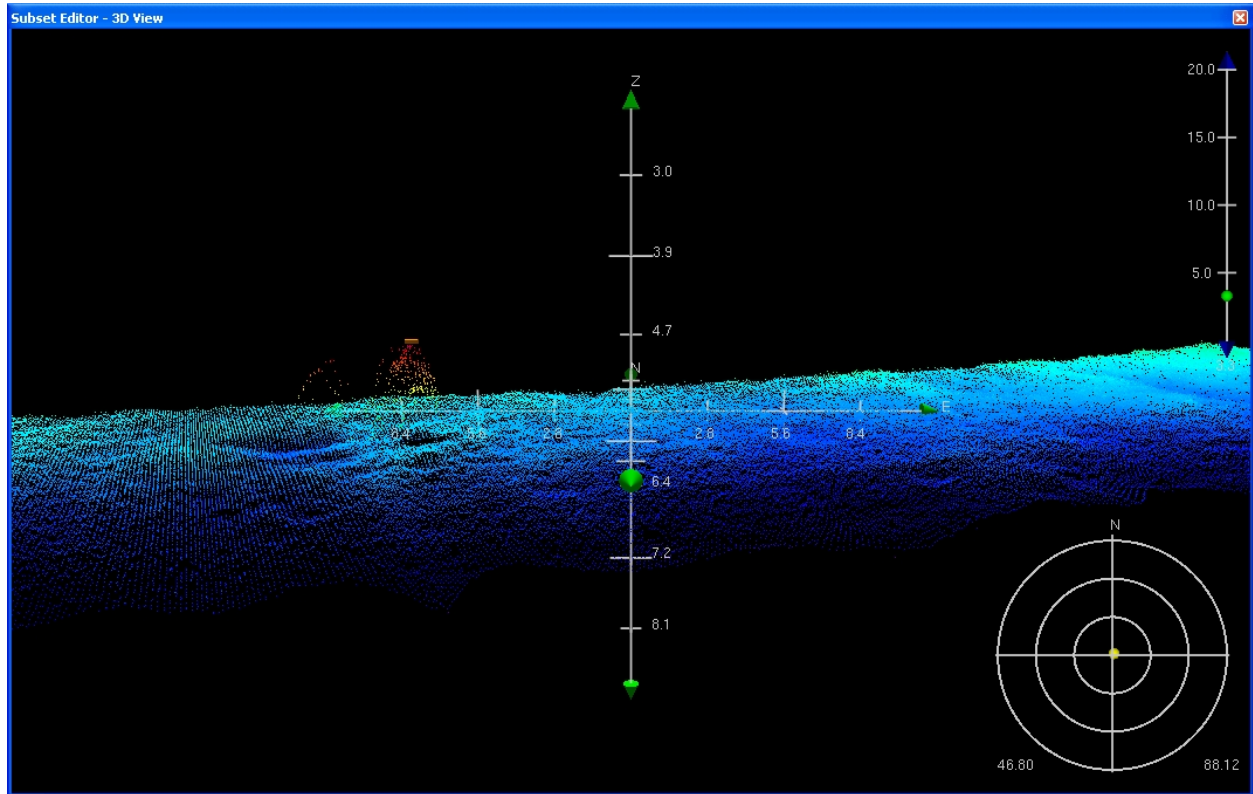


Figure 2.6.1

2.7) Uncharted Obstruction 4

Survey Summary

Survey Position: 27° 37' 02.8" N, 082° 42' 60.0" W
Least Depth: 5.14 m (= 16.87 ft = 2.811 fm = 2 fm 4.87 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.966 m ; TVU (TPEv) ± 0.277 m
Timestamp: 2011-104.13:59:25.920 (04/14/2011)
Survey Line: h12019 / s3004_reson8125 / 2011-104 / _000_1359a
Profile/Beam: 457/40
Charts Affected: 11411_1, 11415_1, 11416_1, 11412_1, 1114A_1, 11400_1, 11451_17, 11006_1, 11013_1, 411_1

Remarks:

Contact was detected in 200% SSS coverage and investigated using MBES. Least depth was determined to be significant.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12019/s3004_reson8125/2011-104/_000_1359a	457/40	0.00	000.0	Primary
h12019/s3004_klein5000_200/2010-271/tb100928152100	0002	0.85	038.8	Secondary

Hydrographer Recommendations

Hydrographer recommends charting Obstruction at current survey location.

Cartographically-Rounded Depth (Affected Charts):

17ft (11411_1, 11415_1, 11416_1, 11412_1, 11451_17)

2 ¾fm (1114A_1, 11400_1, 11006_1, 11013_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 6:least depth known
 SORDAT - 20110527
 SORIND - US,US,Survey,H12019
 TECSOU - 3:found by multi-beam
 VALSOU - 5.141 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

3 - AWOIS Features

3.1) AWOIS #10319 - AWOIS 10319 OBSTRUCTION

See Chapter 2 - New Features: Feature 2.1)

3.2) AWOIS #10323 - AWOIS 10323 OBSTRUCTION

See Chapter 1 - Charted Features: Feature 1.4)

3.3) Previously Charted Obstruction 24ft. AWOIS 10318

See Chapter 1 - Charted Features: Feature 1.7)

3.4) Previously Charted Wreck 20ft. AWOIS 9833

See Chapter 1 - Charted Features: Feature 1.8)

3.5) Previously Charted Obstruction 24ft. AWOIS 10321

See Chapter 1 - Charted Features: Feature 1.10)

3.6) Previously Charted Obstruction 23ft. AWOIS 10322

See Chapter 1 - Charted Features: Feature 1.11)



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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : June 7, 2011

HYDROGRAPHIC BRANCH: Pacific
HYDROGRAPHIC PROJECT: OPR-J417-NRT1-2011
HYDROGRAPHIC SHEET: H12019

LOCALITY: Entrance to Tampa Bay, FL
TIME PERIOD: August 19, 2010 - May 27, 2011

TIDE STATION USED: St. Petersburg, FL 872-6520
Lat. 27° 45.6' N Long. 82° 37.6' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.602 meters

TIDE STATION USED: Port Manatee, FL 872-6384
Lat. 27° 38.3' N Long. 82° 33.7' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.585 meters

TIDE STATION USED: Old Port Tampa, FL 872-6607
Lat. 27° 51.5' Long. 82° 33.2'
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.652 meters

TIDE STATION USED: McKay bay Entrance, FL 872-6667
Lat. 27° 54.8' Long. 82° 25.5'
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.710 meters

REMARKS: RECOMMENDED Zoning/Grid

Please use the preliminary zoning file "J417NRT12010CORP" submitted with the 2010 project instructions for OPR-J417-NRT1-2010. Zones TB1, TB2, TB17, TB18, TB22, TB34, and TB39 are the applicable zones for H12019 during the time period between August 19, 2010 and October 14, 2010.

Please use the TCARI grid "J417NRT12011.tc" as the final grid for project OPR-J417-NRT1-11, H12019, during the time period between January 11, 2011 and May 27, 2011.

Refer to attachments for grid 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).

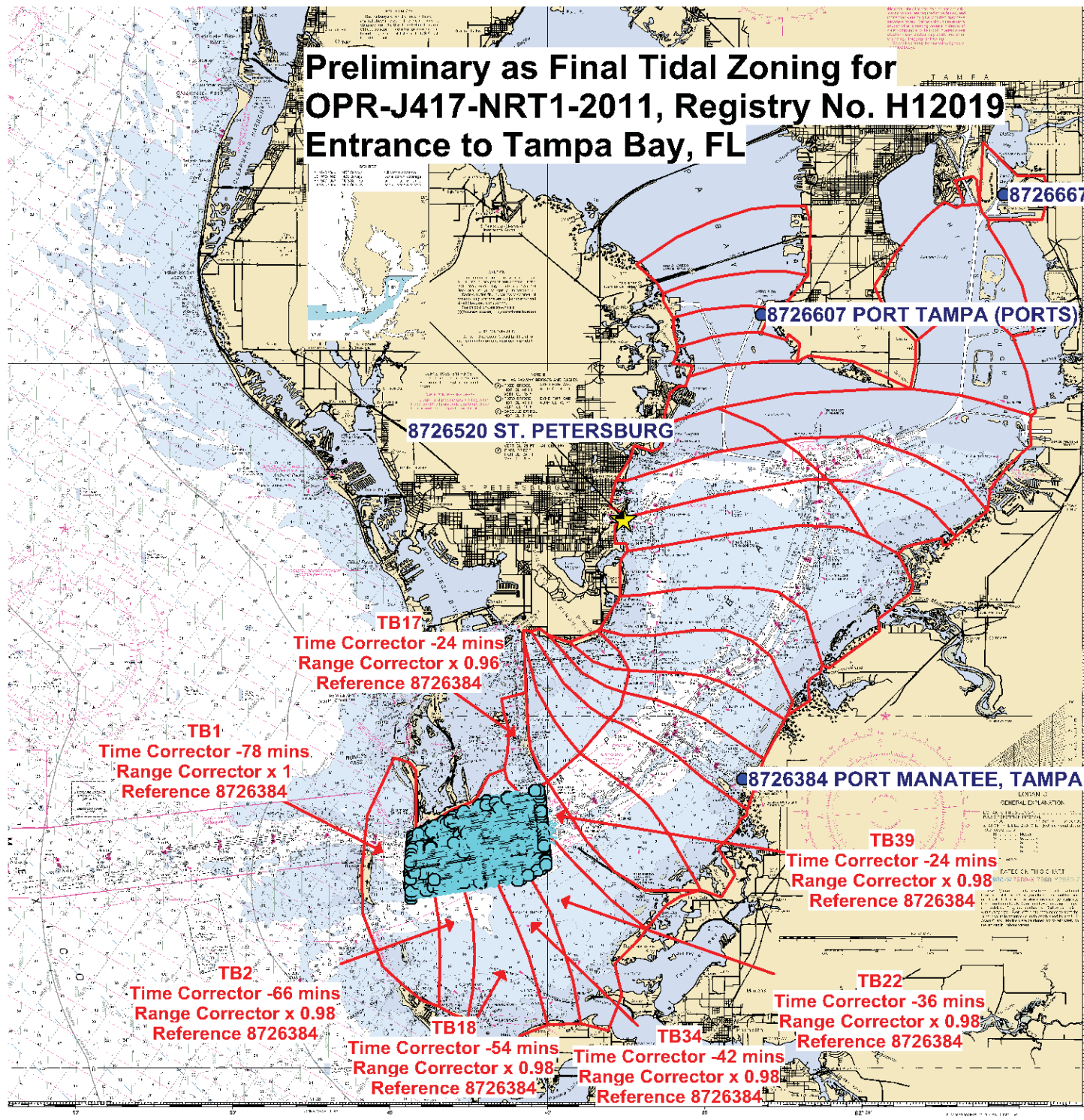
Gerald Hovis

Digitally signed by Gerald Hovis
DN: cn=Gerald Hovis, o=Center for Operational
Oceanographic Products and Services, ou=NOAA/NOS/
CO-OPS/OD/PSB, email=gerald.hovis@noaa.gov, c=US
Date: 2011.06.08 17:14:42 -04'00'

CHIEF, Products and Services Branch



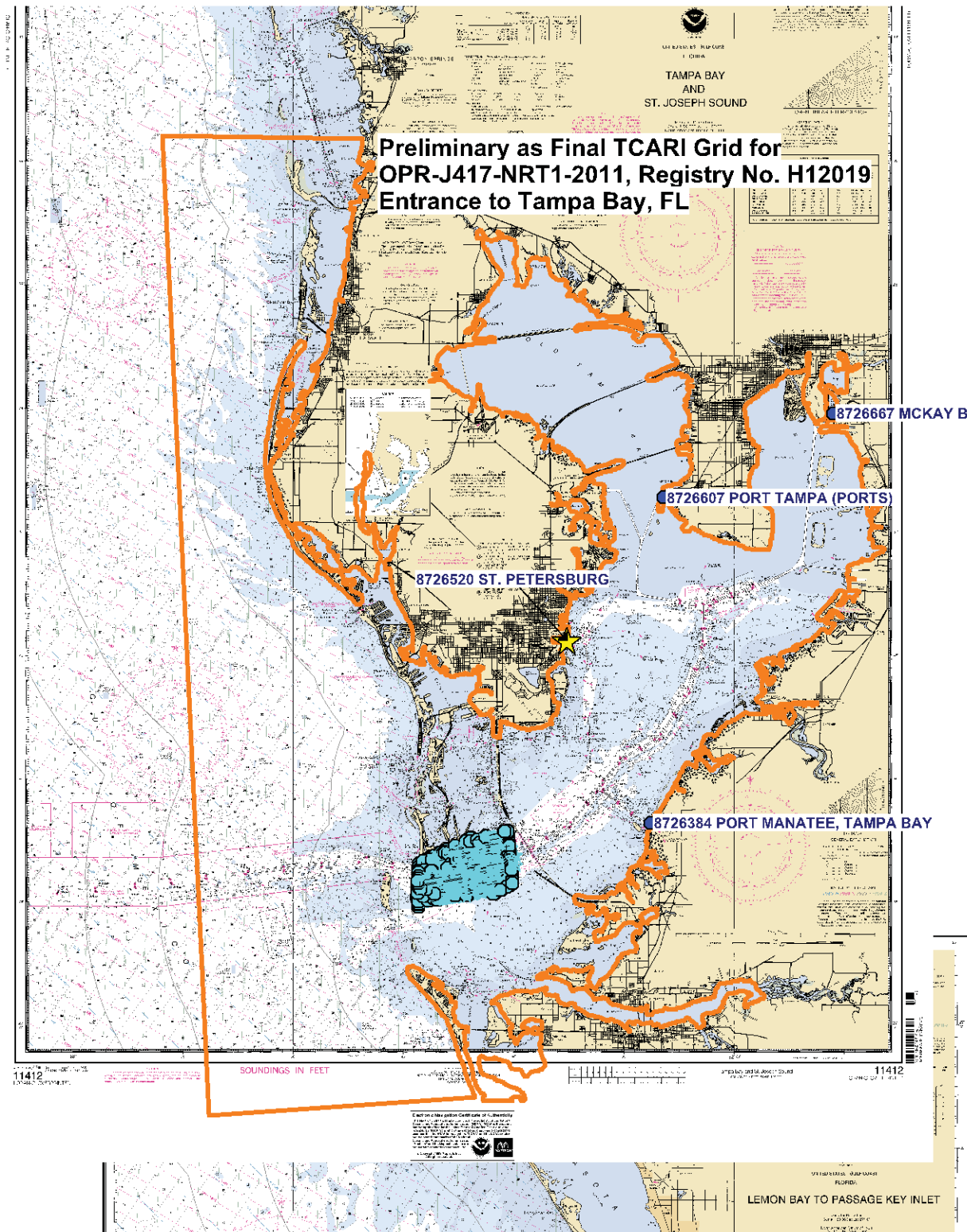
Preliminary as Final Tidal Zoning for OPR-J417-NRT1-2011, Registry No. H12019 Entrance to Tampa Bay, FL



SOUNDINGS IN FEET

11412

LOPIN C. COLEMAN 11424



PHB Compilation Log

General Survey Info

Survey Number	<input type="text" value="H12019"/>	Field Unit	<input type="text" value="NRT 1"/>	State	<input type="text" value="FL"/>	UTM Zone	<input type="text" value="17"/>
Project Number	<input type="text" value="OPR-J417-NRT1-09"/>	Project Name (Locality)	<input type="text" value="Tampa Bay"/>				
Start Date	<input type="text" value="08/19/2010"/>	Sublocality	<input type="text" value="Entrance to Tampa Bay"/>				
End Date	<input type="text" value="05/26/2011"/>	Survey Scale	<input type="text" value="20,000"/>	Compilation Scale	<input type="text" value="40,000"/>		

Affected Raster Charts

Chart	KAPP	Scale	Edition	Date	NTM Date
11415	2981	40,000	8	08/01/2006	09/24/2011

Add Chart	Remove Chart
-----------	--------------

Affected Electronic Charts

ENC	Scale
US5FL11M	40,000

Add ENC	Remove ENC
---------	------------

Spatial Reference

Horizontal Datum	<input type="text" value="WGS84"/>
Coordinate System	<input type="text" value="LLDG"/>
Sounding Datum	<input type="text" value="MLLW"/>
Vertical Datum	<input type="text" value="MHW"/>

Junction Surveys

Survey Number	Survey Date	Location Relative to Current Survey
H12018	04/11/2011	East

Add Survey	Remove Survey
------------	---------------

PHB Compilation Log

Processing Info

HCell Compiler

QC Reviewer

SAR Reviewer

Source Surfaces

Resolution	File Name
4m	H12019_4m_combined_compilation.csar
<input type="button" value="Add Surface"/>	<input type="button" value="Remove Surface"/>

Supporting Documents

Name	Version
Specs and Deliverables	Aug 2011
HCell Specs	6.1
<input type="button" value="Add Doc"/>	<input type="button" value="Remove Doc"/>

Software Used

Software	Version, HF	Used For
CARIS HIPS	7.0 SP2 HF3	SAR Review. Inspection of Combined BASE Surfaces.
Pydro	11.8	SAR Review. Generation of Features Reports.
CARIS BASE Editor	3.2 HF2	Creation of soundings and bathy-derived features, meta area object, and Blue Notes; Survey evaluation and verification; Initial HCell assembly.
CARIS S-57 Composer	2.2 HF4	Final compilation of the HCell, correct geometry and build topology, apply final attributes, export the HCell, and QA.
CARIS GIS	4.4a	Setting the sounding rounding variable for conversion of the metric HCell to NOAA charting units with NOAA rounding. (For Fathoms and Feet chart units only.)
CARIS HOM	3.3 SP3 HF8	Perform conversion of the metric HCell to NOAA charting units with NOAA rounding. (For Fathom and Feet chart units only)
CARIS Plot Composer	5.1 SP 2	Generate plots of CARIS Session files used for QC.
HydroService, dKart Inspector		Validation check of the base cell file.
Fugawi View ENC	1.0.0.3	Independent inspection of final HCells using COTS viewer.

Product Info

Deliverables

Chart Scale HCell	<input type="text" value="H12019_CS.000"/>
Survey Scale HCell	<input type="text" value="H12019_SS.000"/>
HCell Report for MCD	<input type="text" value="H12019_HR.pdf"/>
Feature Listing	<input type="text" value="H12019_FL.txt"/>
Descriptive Report	<input type="text" value="H12019_DR.pdf"/>
Survey Outline	<input type="text" value="H12019_Outline.gml and .xsd"/>

Horizontal and Vertical Units

During creation of the HCell all soundings and features are maintained in metric units with as high precision as possible. Depth units for soundings measured with sonar maintain millimeter precision. Depths on rocks above MLLW and heights on islets above MHW are typically measured with range finder, so precision is less.

Depth Units (DUNI)	<input type="text" value="Feet"/>
Height Units (HUNI)	<input type="text" value="Feet"/>
Positional Units (PUNI)	<input type="text" value="Meters"/>

PHB Compilation Log

Radius Setting			Contours			
A survey-scale sounding (SOUNDG) feature object layer was built from the Combined Surface in CARIS BASE Editor. A shoal-biased selection was made at survey scale using a Radius Table file with values shown below.			Depth contours at the intervals on the largest scale chart are included in the SS HCell for MCD raster charting division to use for guidance in creating chart contours. With the exception of the zero contours included in the *_CS file, contours have not been deconflicted against shoreline features, soundings and hydrography.			
Radius (mm)	Min. Depth (m)	Max Depth (m)	Charted Contours	Metric Equivalent	Metric- NOAA Rounded	Chart Contours - NOAA Rounded
3	-4.7	10	6ft	1.8288m	2.0574m	6.75ft
4	10	20	12ft	3.6576m	3.8862m	12.75ft
4.5	20	50	18ft	5.4864m	5.715m	18.75ft
5	50	500	30ft	9.144m	9.3726m	30.75ft
			Add Contour	Remove Contour		

Additional Info

Contact Information		Compilation Comments
Inquiries regarding this HCell content or construction should be directed to:		
HCell Compiler	Peter Holmberg	
Phone Number	206-526-6843	
Email	peter.holmberg@noaa.gov	

APPROVAL SHEET
H12019

Initial Approvals:

The survey evaluation and verification has been conducted according to branch processing procedures and the HCell compiled per the latest OCS HCell Specifications.

The survey and associated records have been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, S-57 classification and attribution of soundings and features, cartographic characterization, and verification or disproof of charted data within the survey limits. The survey records and digital data comply with OCS requirements except where noted in the Descriptive Report and are adequate to supersede prior surveys and nautical charts in the common area.

I have reviewed the HCell, accompanying data, and reports. This survey and accompanying digital data meet or exceed OCS requirements and standards for products in support of nautical charting except where noted in the Descriptive Report.