H11534

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey BASIC HYDROGRAPHIC

Field No.

Registry No. H11534

LOCALITY

State FLORIDA

General Locality North Atlantic Ocean

Sublocality 12 NM south of Cape Canaveral

2007

CHIEF OF PARTY

LCDR Lawrence T. Krepp, NOAA

LIBRARY & ARCHIVES

DATE

NOAA FORM 77-28 (11-72) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

H11534

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

State:	**Florida**
General Locality:	**North Atlantic Ocean**
Sub-Locality:	**12 NM south of Cape Canaveral**
Scale:	**1:10,000** Date of Survey: **06/14/06 - 05/05/07**
Instructions Dated:	**02/10/2006 & 03/14/07** Project Number: **OPR-H320-RU**
Vessel:	**NOAA Ship RUDE, S590**
Chief of Party:	**LCDR Lawrence T. Krepp, NOAA**
Surveyed by:	**LCDR Krepp, LT DeHart, LT Maddock, ENS Arnold, PS Kitt, and AHST Gunter**
Soundings by:	**ODOM Echotrac DF3200 MKII VBES / RESON 8125 MBES**
Graphic record scaled by:	**RUDE Personnel**
Graphic record checked by:	**RUDE Personnel**
Protracted by:	**N/A** Automated Plot: **N/A**
Verification by:	**Atlantic Hydrographic Branch Personnel**
Soundings in:	~~**Feet**~~ ***Meters*** **at MLLW.** ***Charted depths in feet at MLLW.***

Remarks:

All times are UTC. All soundings corrected with verified tides. Map Projection in UTM 17.

Red, bold, italic not in descriptive report were made during office processing.

DESCRIPTIVE REPORT

To accompany

HYDROGRAPHIC SURVEY H11534

Scale of Survey: 1:10000
Year of Survey: 2006/2007
NOAA Ship *Rude*
LCDR Lawrence T. Krepp, Commanding

A. AREA SURVEYED

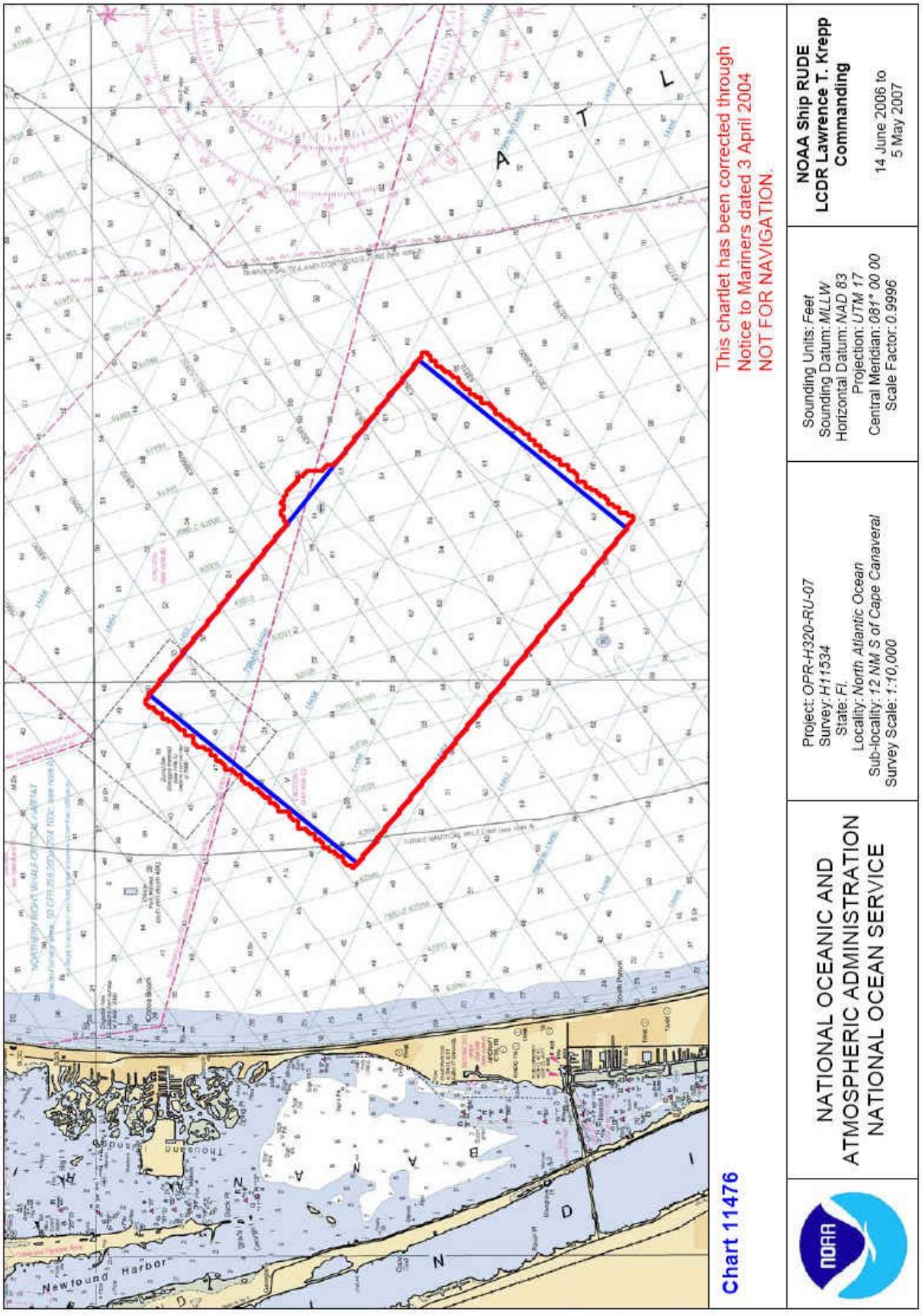
This hydrographic survey was conducted in accordance with Hydrographic Survey Letter of Instructions for project OPR-H320-RU[1] updated March 14, 2007. ***Concur.***

This project was conducted to provide side scan sonar and/or multibeam data in support of National Ocean Service (NOS) nautical charts in response to requests from the Canaveral Pilots Association. Survey H11534 was performed in accordance with NOS requirements for side scan sonar and multibeam data acquisition and processing. ***Concur.***

Full bottom coverage of the assigned survey area, consisting of 200% side scan sonar and VBES was achieved. Multibeam developments were run on item investigations to provide least depth.

For complete survey limits, please see the chartlet on the following page. Note: Statistics for linear nautical miles, bottom samples collected, items investigated, total square nautical miles and specific dates of data acquisition may be found in Appendix III[1] of this report.

[1]filed with original field records


This chartlet has been corrected through
Notice to Mariners dated 3 April 2004
NOT FOR NAVIGATION.
Chart 11476
NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
Project: OPR-H320-RU-07
Survey: H11534
State: Fl.
Locality: North Atlantic Ocean
Sub-locality: 12 NM S of Cape Canaveral
Survey Scale: 1:10,000
Sounding Units: Feet
Sounding Datum: MLLW
Horizontal Datum: NAD 83
Projection: UTM 17
Central Meridian: 081° 00 00
Scale Factor: 0.9996
NOAA Ship RUDE
LCDR Lawrence T. Krepp
Commanding
14 June 2006 to
5 May 2007
Newfound Harbor
Thousand
ATLANTIC OCEAN

B. DATA ACQUISITION and PROCESSING

B.1 EQUIPMENT

NOAA Ship *Rude* (s-590) was the only platform used for this survey. The ship is 90 feet in length, with a 22-foot beam and 7-foot draft.

Vertical-beam echo sounding data were acquired on *Rude* with an Odom Echotrac DF3200 MKII dual-beam echo sounder (24 and 200 kHz). Vertical-beam data were used in conjunction with Side Scan SONAR to ensonify objects on the bottom not apparent at side scan nadir, and also for crossline checks with the mainscheme lines. No vertical-beam data is included while running multibeam developments. All data is included in the final data set.

VBES data are logged by HYPACK's software package, but paper records are acquired and retained for comparison with digitized depths during processing whenever the VBES is the primary sounding instrument.

Rude acquired all side scan sonar data using a Klein 5500 towfish set to the 100-meter range scale. Side scan SONAR data were recorded digitally using Triton ISIS software and archived in Extended Triton Format (xtf).

For developments, single frequency (455 kHz) multi-beam data on *Rude* were acquired with a Reson SeaBat 8125 shallow water swath SONAR system. Positioning and attitude was determined with an Applanix POS/MV and utilizing a Trimble DSM-212L DGPS receiver.

Sound velocity data were acquired using a Sea-Bird SBE 19 SEACAT Conductivity, Temperature and Depth (CTD) Profiler.

The *Rude* encountered no discrepancies or anomalies during this survey, nor was any deviation from standard operating procedures or equipment present. Please refer to the OPR-H320-RU-07 DAPR[1] for detailed equipment and vessel configuration.

[1]filed with original survey records

B.2 QUALITY CONTROL

Side Scan SONAR Quality Control

Daily confidence checks were made by observing the outer ranges of the side scan SONAR images. A good check consisted of distinguishing contacts, i.e. buoy blocks, drag scours, or sand waves across the entire range of the side scan trace. Under conditions of questionable data quality due to high refraction or surface noise, these confidence checks were conducted as often as possible. On this survey, it never became

necessary to suspend Side Scan SONAR operations due to inability to resolve one cubic meter sized targets out to the edge of the range scale.

Shallow Water Multibeam Quality Control

There were no faults with the shallow water multibeam system that affected data integrity in this survey. Please refer to the project's DAPR[1] for detailed discussion of SWMB system calibrations, patch test, data acquisition, and data processing.

Crosslines

The total distance of crosslines is 58.9 linear nautical miles, which equates to 08.84% of total mainscheme lines. Crossline to mainscheme line comparison was conducted by visual inspection after data was imported into MapInfo 8.5. The comparison is adequate, with the differences being two feet or less. Since sounding data was comprised solely of single-beam data, no computer analysis is available.

Junctions

H11534 is junctioned to the west by H11532, a basic hydrographic survey conducted by *Rude* in the 2006 field season, and to the north by survey H11533, a basic hydrographic survey conducted by *Rude* during this field season. Comparison is excellent with H11533, as soundings agree to within one or two feet. In comparison with H11532, there is one area within 110 meters of a radius centered around 28° 19' 00.88" N, 080° 30' 20.49" W, where current soundings are shoaler by as much as four feet than last year's depths in this same location. During the course of survey operations for H11534, a dredging project was ongoing for the Canaveral entrance channel. The area of shoaling noted above is in an area within an active dump site, where it is suspected that the dumping of the dredge spoil from the maintenance dredging project has occurred since completion of H11532 in 2006. No prior surveys were available or provided for comparison.

B.3 CORRECTIONS TO ECHO SOUNDINGS

All methods or instruments were implemented as described in the Correction to the Echo Sounding section of the DAPR[1] for this project. A table detailing all sound velocity profiles is located in Separates II[1].

[1]filed with original survey records

C. VERTICAL and HORIZONTAL CONTROL

Vertical Control

The tidal datum for this project is Mean Lower Low Water (MLLW). All soundings are referenced to MLLW. The operating National Water Level Observation Network (NWLON) station at Trident Pier, FL (872-1604) served as datum control for the survey area. All soundings were reduced to Mean Lower Low Water with verified tides. Opening levels were performed by CO-OPS, and closing levels will be completed by them at the conclusion of OPR-H320.

A Request for Smooth Tides letter was sent to N/OPS1 May 7, 2007, and preliminary zoning was accepted as the final zoning on June 1st (Appendix IV[1]). Verified Tides from the N/OPS1 CO-OPS web site were downloaded and applied to all soundings for this sheet. Tide corrections were applied to the soundings using CARIS HIPS and SIPS v6.1.

Zoning was provided on the project CD. No changes to zoning, time correctors or range ratios were made by field personnel.

Horizontal Control

The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83), projected using UTM zone 17.

Sounding positional control was determined using the Global Positioning System (GPS) corrected by U.S. Coast Guard differential GPS (DGPS) beacon stations. The primary DGPS beacon used for this survey was Cape Canaveral, FL. The primary signal was adequate throughout the survey. No horizontal control stations were established for this survey.

Horizontal dilution of precision (HDOP) was monitored daily. Data was to be re-acquired if the HDOP value exceeded 2.5. The Applanix POS/MV positioning system was also used to monitor the accuracy of the ship's position and orientation. Data was to be re-acquired if POS M/V's estimated position accuracy exceeded 4 m. Neither of the cases above occurred. Refer to the 2006 DAPR[1] for more details regarding *Rude*'s POS M/V settings and operation.

[1]filed with original survey records

D. RESULTS and RECOMMENDATIONS

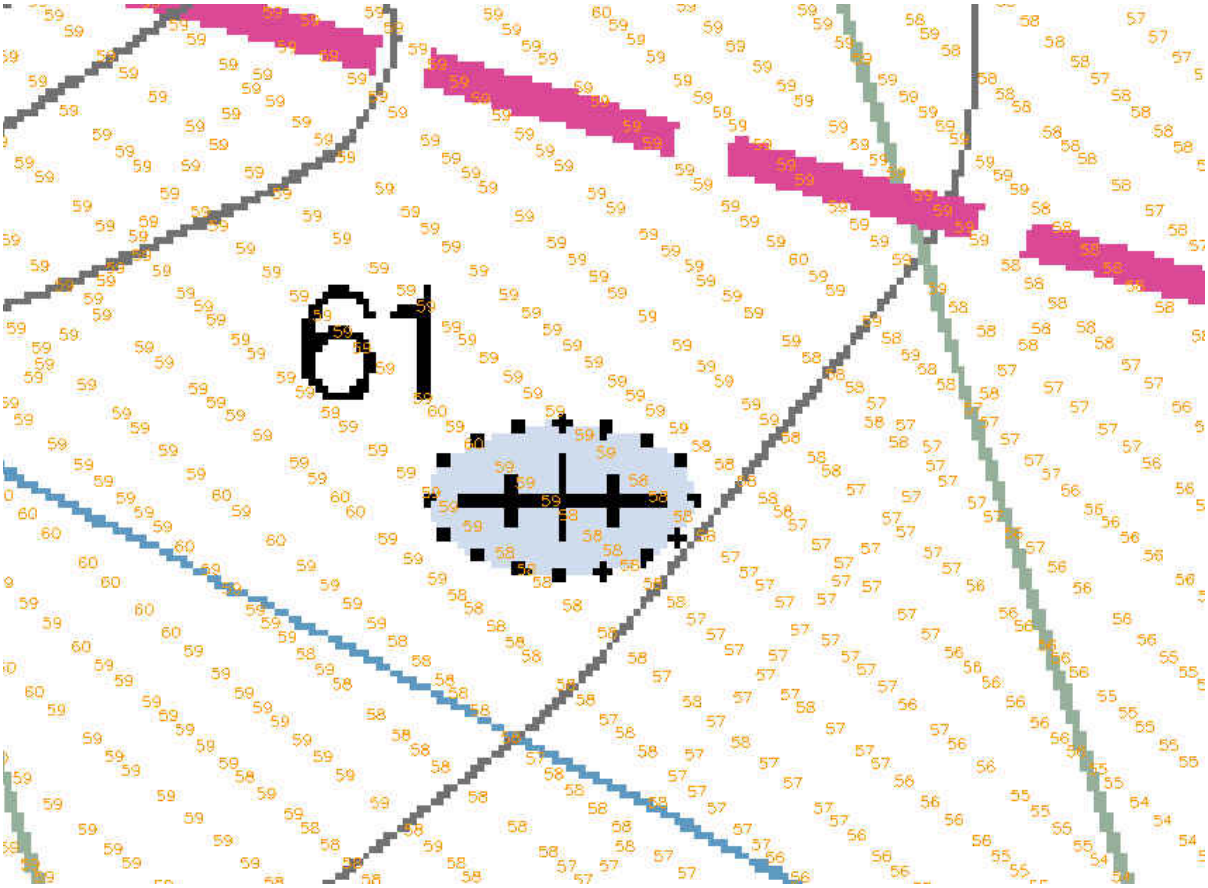
D.1 CHART COMPARISON

Charts Affected: The following charts contain soundings within the survey limits of H11534:

11460	40th Ed	Sep/05	NM	Sep 17/05	LNM	Sep 13/05	1:466940
11476	21st Ed	Jul/06	NM	Jul 22/06	LNM	Jul 11/06	1:80000
11481	6th Ed	Nov/06	NM	Nov 11/06	LNM	Nov 7/06	1:25000

Current survey soundings and features were compared to charted depths and features on NOAA charts 11476 and 11481. Agreement with these charts was adequate with current soundings agreeing to within 2-feet by visual inspection of soundings overlaid on the chart in the PSS. However, the following charted feature is not in agreement:

Fig.1. The charted submerged wreck in approximate position 28° 16' 31.030" N, 080° 26' 59.170" W, was not seen with 200% Side Scan coverage. Hydrographer recommends removing Dangerous Wreck from the chart and replacing with current soundings. ***Concur.***



ENCs Affected: The following electronic navigational charts contain items within the surveyed sounding limits of H11534:

ENC US3FL30M
ENC US5FL81M

The ENC's were compared with current soundings using CARIS 6.1 field sheet editor. Comparison was adequate with the majority of soundings agreeing to within 2 feet. The hydrographer recommends that the current soundings supercede all previous chart editions. ***Concur.***

One new item of interest was found and therefore is not on either ENC. This item has been submitted as a DTON ***(See Evaluation Report for additional comments about the submitted DTON)***. One other item, the charted submerged wreck (AWOIS #13440) on ENC US5FL30M in approximate position 28° 16' 31.030" N, 080° 26' 59.170" W, was not seen with 200% Side Scan coverage. Hydrographer recommends removing Dangerous Wreck from the ENC and replacing with current soundings. ***Concur.***

D.2 ADDITIONAL RESULTS

AWOIS# 13440 was assigned to be investigated in H11534. That item was not found during the course of this sheet's data collection. The Hydrographer recommends that current soundings in this area supersede any previously charted soundings. ***Concur.*** More detailed information can be found in the *Pydro*-generated AWOIS items report found in Appendix II[1] of this report.

AWOIS	Descr	Latitude (N)	Longitude (W)	Search type	Results
13440	Dang. Wk	28° 16' 31.030"	080° 26' 59.170"	200% SS	Nothing found

One charted feature and one uncharted item are addressed in the Descriptive Report. Please refer to ~~Separates section~~ ***Appendices 1 and 2***[1] for all the investigated items to be submitted.

Bottom Samples

Bottom sediment samples were collected at seven (7) locations picked corresponding to charted descriptions. No major discrepancies were found. The hydrographer recommends updating charts with the given characteristics in APPENDIX V[1]. ***Concur.***

[1]***filed with original survey records***

General Description of Surveyed Area and Sounding Comparison

H11534 covers approximately 28 square nautical miles in the North Atlantic Ocean off the coast of Cocoa Beach and Cape Canaveral, FL, approximately 12 NM south of the cape. The closest (west) side of the surveyed area is located 2.7 NM from Cocoa Beach; the other end of H11534 is 10.4 NM off shore. The bottom is generally flat, with a gradual slope that deepens in the offshore direction. The bottom is composed primarily of sand, shale, mud and gravel. The north corner of the surveyed area includes a section of an active dump site. This site is used for the disposal of dredged material. Current soundings throughout the survey area show to be in agreement with charted depths. The Hydrographer recommends that current soundings in this area supercede any previously charted soundings. ***Concur.***

General Agreement

Except for the regions indicated above, comparison between current soundings and the charted soundings were adequate, generally agreeing with plus or minus 2 feet.

Dangers to Navigation

There was one Danger to Navigation item ***(See Evaluation Report for additional comments about the submitted DTON)*** discovered during this survey, and submitted. One other charted item was addressed in this Descriptive Report. Please refer to ~~Separates section~~ ***Appendices 1 and 2***[1] for all the investigated items to be submitted.

Shoreline

There was no shoreline within the survey limits of H11534.

Submarine Cables

No charted submarine cables were present on this survey.

[1] ***filed with original survey records***

E. APPROVAL SHEET

LETTER OF APPROVAL

REGISTRY NO. H11534

Data acquisition, processing, and analysis contributing to the accomplishments of this navigable area survey were conducted under my direct supervision with frequent personal checks of progress and adequacy. All data, field sheets, this Descriptive Report, and accompanying records were reviewed in their entirety and are approved.

This survey is adequate to supersede all prior surveys in common areas and is considered complete and adequate for nautical charting.

Respectfully Submitted:

Shawn Maddock
Lieutenant, NOAA
Field Operations Officer
NOAA Ship RUDE

Approved:

Lawrence T. Krepp
I am approving this document
2007.06.11 12:32:17 -04'00'

Lawrence T. Krepp
Lieutenant Commander, NOAA
Commanding Officer
NOAA Ship RUDE

Appendix I

Danger to Navigation Reports

H11354 Dangers to Navigation

Registry Number: H11534

State: Florida

Locality: North Atlantic Ocean

Sub-locality: 12 NM South of Cape Canaveral

Project Number: OPR-H320_RU-07

Survey Date: 05/05/2007

Charts Affected

Number	Version	Date	Scale
11481	6th Ed.	11/01/2006	1:25000
11476	21st Ed.	07/01/2006	1:80000
11460	40th Ed.	09/01/2005	1:466940
11451	32nd Ed.	03/01/2005	1:495362
11009	37th Ed.	07/01/2004	1:1200000
411	51st Ed.	12/01/2006	1:2160000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	41-ft Obstn 30/75	Obstruction	12.48 m	28° 18' 21.139" N	080° 30' 58.620" W	---

1.1) 41-ft Obstn 30/75

DANGER TO NAVIGATION

Survey Summary

Survey Position: 28° 18' 21.139" N, 080° 30' 58.620" W

Least Depth: 12.48 m

Timestamp: 2007-125.15:19:08.218 (05/05/2007)

Survey Line: h11534 / ru_mb / 2007-125 / 816_1518

Profile/Beam: 430/75

Charts Affected: 11481_1, 11476_1, 11460_1, 11451_17, 11009_1, 411_1

Remarks:

Significant, one of several mound-like piles initially located by 200% SSS. Reson 8125 MB bathymetry development data determined a least depth of 41 feet with a surrouning depth of 45 feet, corrected to verified tides.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11534/ru_mb/2007-125/816_1518	430/75	0.00	000.0	Primary
h11534/ru_ss/2007-122/235_1319	0001	42.90	183.4	Secondary
h11534/ru_mb/2007-125/816_1518	693/44	79.53	171.0	Secondary (grouped)

Hydrographer Recommendations

Chart Dangerous Obstn, least depth 41 feet, based on verified tides at survey position.

Cartographically-Rounded Depth (Affected Charts):

41ft (11481_1, 11476_1, 11451_17)

6 ¾fm (11460_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: SORDAT - 20070505

SORIND - US,US,surve,H11534

Office Notes

Concur with clarification. Shown on chart 11481; 6th Ed., November 2006 and smaller scale charts as danergous obstruction least depth 41 feet. Due to the feature's location within the charted dumping ground, chart disposition as an obstruction is not required. Delete danergous obstruction least depth 41 feet, and text OBSTN at Lat: 28°18'22.524"N Lon: -080°30'58.527"W and chart 41-foot depth

Feature Images

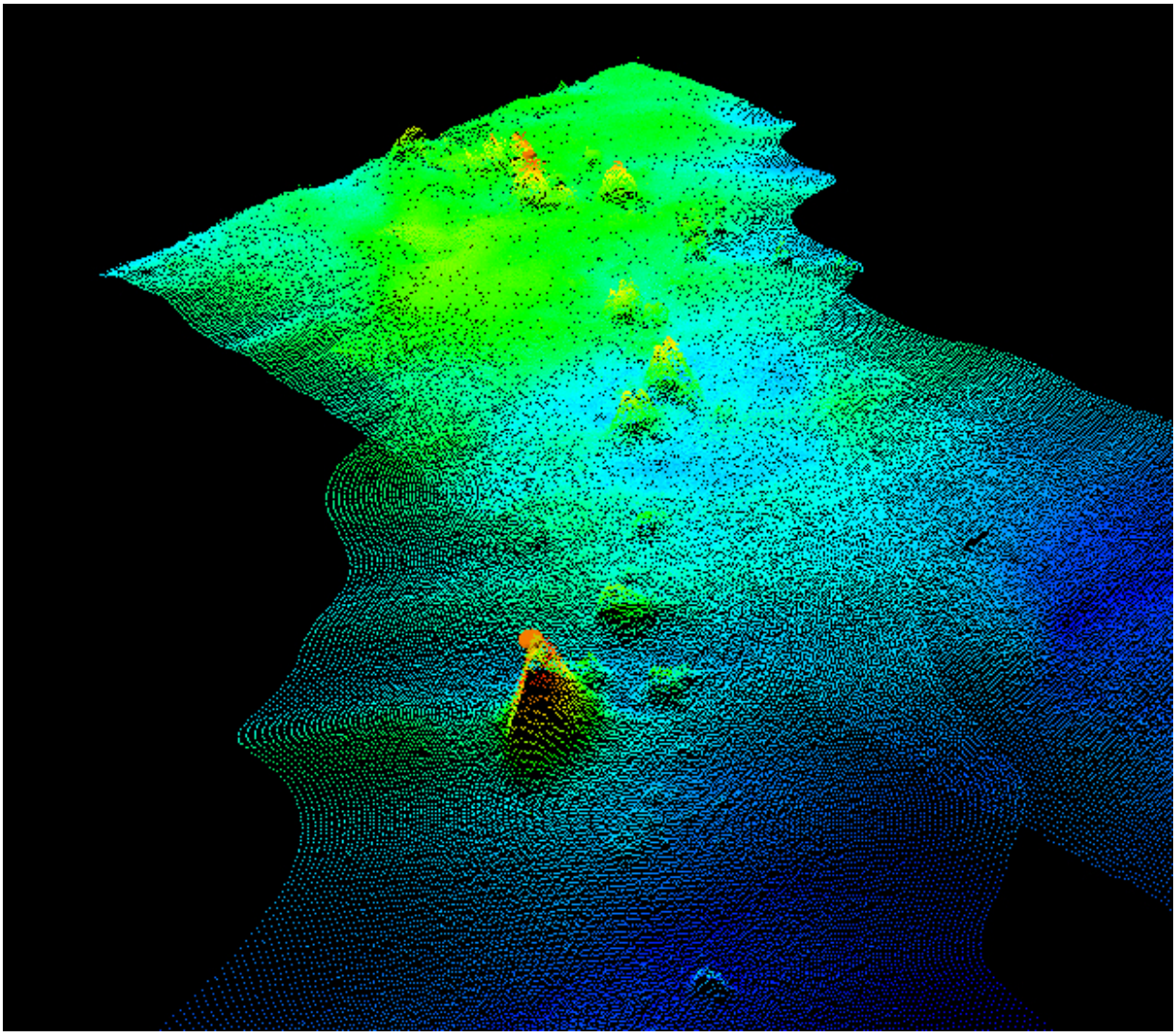


Figure 1.1.1

Appendix II

Survey Feature Reports

H11534 Survey Features Report

Registry Number: H11534

State: Florida

Locality: North Atlantic Ocean

Sub-locality: 12 NM South of Cape Canaveral

Project Number: OPR-H320_RU-07

Survey Date: 05/05/2007

Charts Affected

Number	Version	Date	Scale
11476	21st Ed.	07/01/2006	1:80000
11460	40th Ed.	09/01/2005	1:466940
11451	32nd Ed.	03/01/2005	1:495362
11009	37th Ed.	07/01/2004	1:1200000
411	51st Ed.	12/01/2006	1:2160000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---
2.1	56-ft Obstn 303/99	Sounding	17.15 m	28° 15' 30.135" N	080° 25' 23.917" W	---

1 - AWOIS

1.1) AWOIS #13440 - UNKNOWN

No Primary Survey Feature for this AWOIS Item

Search Position: 28° 16' 31.030" N, 080° 26' 59.170" W

Historical Depth: [None]

Search Radius: 1000

Search Technique: S2, MB, SD

Technique Notes: [None]

History Notes:

L-2066/75 -- 26 FT UNNAMED P/C REPORTED SUNK IN POSITION 28-16-30 N, 80-27-00 W (NAD 83). UPDATED 12/29/2005 JCM.

Survey Summary

Charts Affected: 11476_1, 11460_1, 11451_17, 11009_1, 411_1

Remarks:

During course of 200% SSS investigation, nothing was seen on AWOIS #13440.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-H320-RU-07_AWOIS	AWOIS # 13440	0.00	000.0	Primary

Hydrographer Recommendations

~~Disregard.~~ AWOIS is disproved. Remove Dangerous Wk and replace with current soundings.

S-57 Data

[None]

Office Notes

Concur.

2 - DR_UnCharted

2.1) 56-ft Obstn 303/99

Survey Summary

Survey Position: 28° 15' 30.135" N, 080° 25' 23.917" W

Least Depth: 17.15 m

Timestamp: 2007-125.14:18:29.926 (05/05/2007)

Survey Line: h11534 / ru_mb / 2007-125 / 821_1417

Profile/Beam: 303/99

Charts Affected: 11476_1, 11460_1, 11451_17, 11009_1, 411_1

Remarks:

Insignificant. Object is new since last year's first 100% SSS survey.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11534/ru_mb/2007-125/821_1417	303/99	0.00	000.0	Primary
h11534/ru_ss/2007-123/245_1453	0001	3.39	333.7	Secondary

Hydrographer Recommendations

Disregard.

Cartographically-Rounded Depth (Affected Charts):

56ft (11476_1, 11451_17)

9 ¼fm (11460_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: OBJNAM - 56 ft obstruction

QUASOU - 6:least depth known

RECDAT - 20071213

SORDAT - 20070505

SORIND - US,US,surve,H11534

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

VALSOU - 17.149 m

VERDAT - 12:Mean lower low water

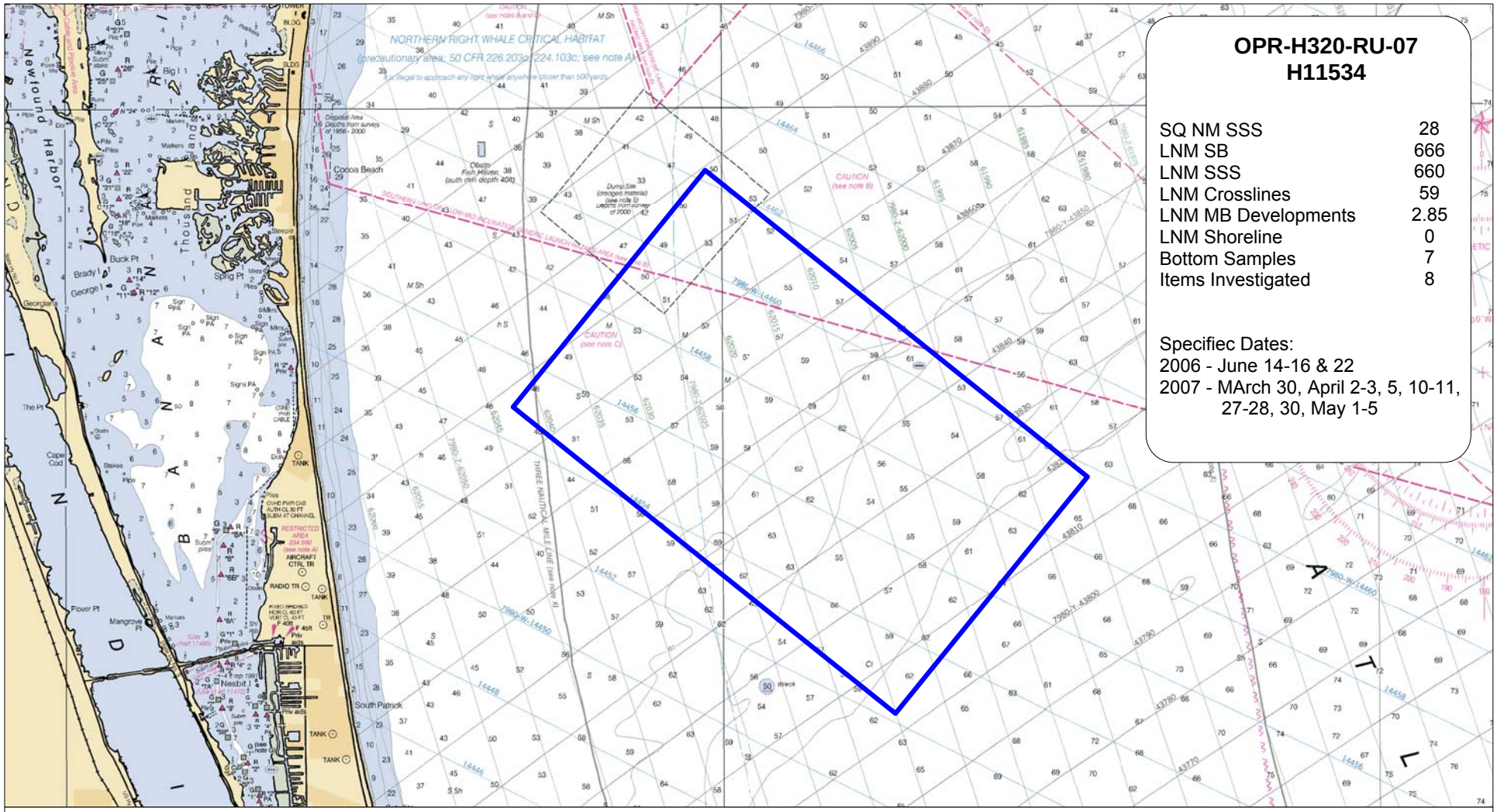
WATLEV - 3:always under water/submerged

Office Notes

Do Not Concur. Chart 56-ft Obstn at surveyed location. See Evaluation Report.

Appendix III

Final Progress Sketch and Survey Outline



OPR-H320-RU-07
H11534

SQ NM SSS	28
LNM SB	666
LNM SSS	660
LNM Crosslines	59
LNM MB Developments	2.85
LNM Shoreline	0
Bottom Samples	7
Items Investigated	8

Specifiec Dates:
2006 - June 14-16 & 22
2007 - MArch 30, April 2-3, 5, 10-11, 27-28, 30, May 1-5

Chart 11476

This chartlet has been corrected through Notice to Mariners dated 3 April 2004
NOT FOR NAVIGATION.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

Project: *OPR-H320-RU-07*
Survey: *H11534*
State: *Fl.*
Locality: *North Atlantic Ocean*
Sub-locality: *12 NM S of Cape Canaveral*
Survey Scale: *1:10,000*

Sounding Units: *Feet*
Sounding Datum: *MLLW*
Horizontal Datum: *NAD 83*
Projection: *UTM 17*
Central Meridian: *081° 00 00*
Scale Factor: *0.9996*

NOAA Ship RUDE
LCDR Lawrence T. Krepp
Commanding

14 June 2006 to
5 May 2007

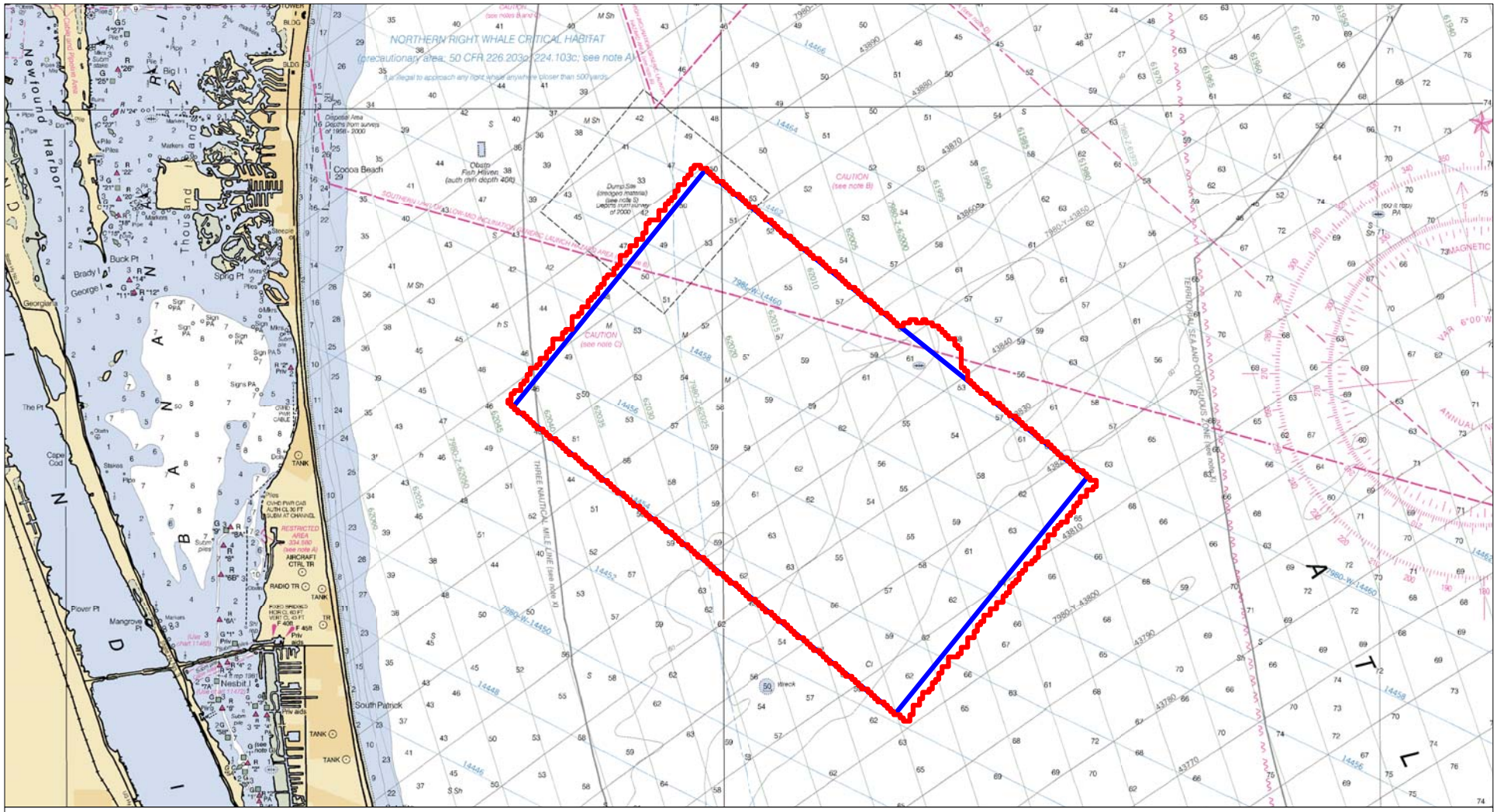


Chart 11476

This chartlet has been corrected through
Notice to Mariners dated 3 April 2004
NOT FOR NAVIGATION.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

Project:	*OPR-H320-RU-07*
Survey:	*H11534*
State:	*Fl.*
Locality:	*North Atlantic Ocean*
Sub-locality:	*12 NM S of Cape Canaveral*
Survey Scale:	*1:10,000*

Sounding Units:	*Feet*
Sounding Datum:	*MLLW*
Horizontal Datum:	*NAD 83*
Projection:	*UTM 17*
Central Meridian:	*081° 00 00*
Scale Factor:	*0.9996*

NOAA Ship RUDE
LCDR Lawrence T. Krepp
Commanding

14 June 2006 to
5 May 2007

Appendix IV

Tides and Water Levels

May 07, 2007

MEMORANDUM FOR:	Chief, Requirements and Development Division, N/OPS1
FROM:	LCDR Lawrence T. Krepp, NOAA Ship RUDE
SUBJECT:	Request for Approved Tides/Water Levels

Please provide the following data:

1. Tide Note
2. Final zoning in MapInfo and .MIX format
3. Six Minute Water Level data (Co-ops web site)

Transmit data to the following:

NOAA/NOS/Atlantic Hydrographic Branch
N/CS33, Building #2
439 West York Street
Norfolk, VA 23510
ATTN: Chief AHB

These data are required for the processing of the following hydrographic survey:

Project No.:	OPR-H320_RU-07
Registry No.:	H11534
State:	Florida
Locality:	North Atlantic Ocean
Sublocality:	12 NM South of Cape Canaveral

Attachments containing:
1) an Abstract of Times of Hydrography,
2) digital MID MIF files of the track lines from Pydro

cc: N/CS33

Year_DOY	Min Time	Max Time
2006_165	14:01:58	19:58:05
2006_166	13:25:10	19:38:03
2006_167	13:11:53	18:21:53
2006_173	14:18:33	20:41:41
2007_089	13:26:34	18:13:20
2007_092	13:50:00	20:10:57
2007_093	13:27:29	19:52:25
2007_095	13:20:25	15:55:03
2007_100	13:59:23	19:16:51
2007_101	14:06:20	18:02:29
2007_117	14:19:17	17:29:32
2007_118	13:40:45	18:30:19
2007_120	14:02:55	20:23:54
2007_121	15:30:15	20:16:22
2007_122	13:19:21	20:09:09
2007_123	13:12:37	18:28:50
2007_124	13:38:20	16:14:39
2007_125	14:02:09	16:13:25

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : May 25, 2007

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-H320-RU-2007
HYDROGRAPHIC SHEET: H11534

LOCALITY: 12 NM South of Cape Canaveral, Offshore FL

TIME PERIOD: June 14 - 22, 2006
March 30 - May 5, 2007

TIDE STATION USED: 872-1604 Trident Pier, FL
Lat. 28° 24.9'N Long. 80° 35.6' W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.105 meters

REMARKS: RECOMMENDED ZONING

Preliminary zoning is accepted as the final zoning for project OPR-H320-RU-2007, H11534 during the time periods between June 14 - 22, 2006, and March 30 - May 5, 2007.

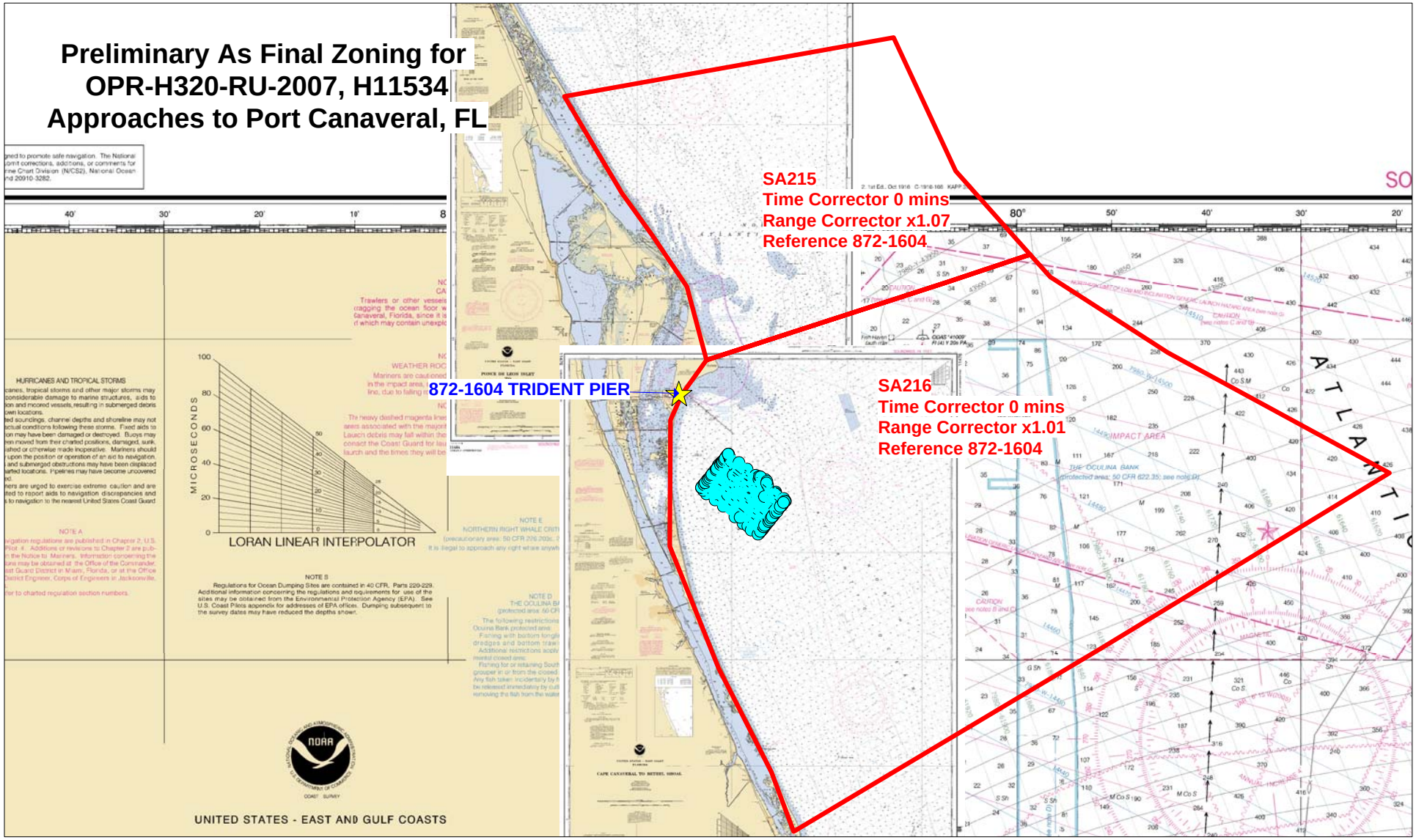
Please use the zoning file "H320RU2007CORP" submitted with the project instructions for OPR-H320-RU-2007. Zone SA216 is the applicable zone for H11534.

Refer to attachments for zoning information.

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

_____
CHIEF, PRODUCT AND SERVICES DIVISION

Preliminary As Final Zoning for OPR-H320-RU-2007, H11534 Approaches to Port Canaveral, FL



Subject: re: final tide zoning for H320-RU-2007, H11534
From: Monica Cisternelli <Monica.Cisternelli@noaa.gov>
Date: Fri, 01 Jun 2007 20:03:56 -0400
To: Norris A Wike <Norris.A.Wike@noaa.gov>, _OMAO MOA FOO Rude <FOO.Rude@noaa.gov>
CC: Gerald Hovis <Gerald.Hovis@noaa.gov>

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

DATE: 06/01/2007

MEMORANDUM FOR: LCDR Lawrence Krepp
Commanding Officer, NOAA Ship RUDE

FROM: Gerald Hovis
Products and Services Division, N/OPS1

SUBJECT: Delivery of Final Tide Zoning for Hydrographic Surveys

This is notification that the preliminary zoning is accepted as the final zoning correctors for survey project OPR-H320-RU-2007, registry No. H11534, during the time period between June 14 - 22, 2006 and March 30 -May 5, 2007. The accepted reference station for registry No. H11534 is Trident Pier, FL.

Included with this memo is one Tide Note in .PDF format , stating the preliminary zones have been accepted as the final zoning.

H11534.pdf	**Content-Type:** application/pdf **Content-Encoding:** base64

Appendix V

Supplemental Survey Records and Correspondence

"BS_7",552179.07,3120144.60,15.60,28.206070166669,-80.468296333333,16:22:39 05/04/2007,"S Sh   ","Update charts with the given characteristics under Remarks. Depths are uncorrected."
"BS_6",552737.30,3120366.37,16.12,28.208049833335,-80.462598166667,16:30:09 05/04/2007,"S Sh   ","Update charts with the given characteristics under Remarks. Depths are uncorrected."
"BS_4",547575.40,3123855.55,15.85,28.239742000002,-80.515054833333,16:57:52 05/04/2007,"S Sh Cl   ","Update charts with the given characteristics under Remarks. Depths are uncorrected."
"BS_5",549179.51,3127408.02,15.14,28.271749833335,-80.498554333333,17:15:58 05/04/2007,"Gr stk M Sh","Update charts with the given characteristics under Remarks. Depths are uncorrected."
"BS_1",548182.04,3128599.45,14.37,28.282541333335,-80.508675166667,17:27:26 05/04/2007,"S Sh   ","Update charts with the given characteristics under Remarks. Depths are uncorrected."
"BS_2",546288.97,3128830.21,13.46,28.284692333335,-80.527969500000,17:38:32 05/04/2007,"Gr stk M Sh","Update charts with the given characteristics under Remarks. Depths are uncorrected."
"BS_3",545518.59,3127043.69,13.31,28.268593000002,-80.535895166667,17:50:50 05/04/2007,"S M Sh   ","Update charts with the given characteristics under Remarks. Depths are uncorrected."

NOAA FORM 75-44
(12-84)

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESSEL	PROJ. NO. / FIELD NO.	YEAR	SURVEY TITLE	SURVEY NO.	CHECKED BY	DATE CHECKED
RUDE S-590	PROJ. NO. OPR-H320 FIELD NO. H11534	2007	North Atlantic Ocean	H- 11534		May 25

POSITION NO.	DAY OF THE YEAR	SAMPLE POSITION LATITUDE ° ' "	SAMPLE POSITION LONGITUDE ° ' "	DEPTH (METERS)	Sample Type	Approximate Penetration	Core Length	FIELD DESCRIPTION SIZE OR CONSISTENCY -- COLOR -- NOUN (Use standard abbreviations)	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS.
BS-1	124	28*16'57.149'	-080*30'31.23:	14.37	Grab	5 cm	n/a	S Sh		
BS-2	124	28*17'04.892	-080*31'40.690	13.46	Grab	5 cm	n/a	Gr stk M Sh		
BS-3	124	28*16'06.935	-080*32'09.223	13.31	Grab	5 cm	n/a	S M Sh		
BS-4	124	28*14'23.071	-080*30'54.197	15.85	Grab	5 cm	n/a	S Sh Cl		
BS-5	124	28*16'18.299	-080*29'54.796	15.14	Grab	5 cm	n/a	Gr stk M Sh		
BS-6	124	28*12'28.979	-080*27'45.353	16.12	Grab	5 cm	n/a	S Sh		
BS-7	124	28*12'21.853	-080*28'05.867	15.60	Grab	5 cm	n/a	S Sh		

Atlantic Hydrographic Branch
Evaluation Report for H11534 (2007)

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

B. DATA ACQUISITION AND PROCESSING

B.1 DATA PROCESSING

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

HSTP PYDRO, version 7.3 r2252
CARIS HIPS/SIPS, version 6.1 SP1 HF 1-7
CARIS Bathy Manager, version 2.1 HF 1-3
CARIS HOM ENC, version 3.3 HF 1-7
DKART INSPECTOR, version 5.0 Build 707

B.2 QUALITY CONTROL

B.2.1 H-CELL

See the attached pre-compilation log for H-Cell process metadata.

C. VERTICAL AND HORIZONTAL CONTROL

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM zone 17. Office H-Cell processing of this survey required translating the datum to Latitude and Longitude, World Geodetic System 1984 (LLDG WGS84) to meet S-57 ENC requirements. The .000 H-Cell format serves as the exchange file format submitted to MCD.

D. CHART COMPARISON

D.1.1 HYDROGRAPHY

The charted hydrography originates with prior surveys and required no further consideration.

The following items were noted by the office reviewer:

(1) The compiler does not concur with the remarks and recommendation concerning a feature at 28° 15' 30.135 N, 080° 25' 23.917" W. Originally deemed insignificant by the field unit, the feature is approximately 1 meter high, with a least depth of 17.15 meters (56 feet). The office reviewer recommends charting the feature as an obstruction.

(2) The office reviewer recommends to delete the 41-foot dangerous obstruction charted at 28° 18' 21.139" N, 080° 30' 58.620" W and to chart present survey soundings. The feature was originally submitted by the field unit as a DtoN. The feature is shoaler than surrounding charted depths, but it is located in a charted dump site.

D.2 COMPARISON WITH PRIOR SURVEYS

A comparison with prior survey was not done during office processing accordance with section 4 of the memorandum titled "Changes to Hydrographic Survey Processing", dated May 24, 1995.

MISCELLANEOUS

Chart compilation was performed by Atlantic Hydrographic Branch personnel in Norfolk, VA. Compilation data will be forwarded to Marine Chart Division (MCD). The following NOS raster navigational charts (RNCs) and electronic navigational charts (ENCs) were used for compilation of the present survey.

RNC	*Scale*	*Edition*	*Updated through LNM*
11481	1:25,000	6	1/15/08
11476	1:80,000	21	1/15/08

ENC	*Update*	*Update Application Date*	*Issue Date*
US3FL30M	0	7/12/07	7/12/07
US5FL81M	2	6/26/07	2/6/08

D.3 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 or the Blue Notes should be retained as charted. Refer to the DR for further survey requirements recommended by the hydrographer.

AHB PRE-COMPILATION PROCESS

REGISTRY No. H11534
PROJECT No. OPR-H320-RU
FIELD UNIT RUDE
PRE-COMPILER RICHARD SULLIVAN

Milestones	File Name
Product Surface Creation	PSH11534_10k_100mrad_5mres PSH11534_10k_150mrad_115mres
Shifted Surface	PSH11534_10k_150mrad_115mres_SHIFTED
Contour Layer	H11534_CONTOUR
Survey Scale Soundings	H11534_SSSoundg
Chart Scale Soundings	H11534_CUSoundg
Feature Layer	H11534_FEATURES
Meta-objects Layer	H11534_META
Blue Notes	H11534_BlueNotes
Content Review	01/15/2008

SPECIFICATIONS:

I. COMBINED SURFACE:
   a. H11534_AHB_5m_Combined

II. PRODUCT SURFACE:
   a. Scale: 1:10,000
   b. Radius: 100 m
   c. Resolution: 5m
   d. Depth
      i. Minimum: 12.46 m
      ii. Maximum: 19.73 m

III. SHIFTED SURFACE:
   a. Single Shift Value: -0.229

IV. CONTOUR LAYER:
   a. Use a Depth List:
   b. Output Options: Create contour lines: line object: DEPCNT; Value Attribute: VALDCO

V. SOUNDING SELECTION:
   a. Selection Criteria:
      i. Radius
      ii. Shoal biased
      iii. Use Single-Defined Radius: 175 distance on ground (m)
      iv. Filter: Generalized !=1
      v. Sounding Rounding Rule: Feet

VI. FEATURES:
   a. H11534_FEATURES

VII. META-OBJECTS:
   a. M_COVR attributes: INFORM: H11534; CATCOV: 1; SORDAT: 05052007; SORIND: US,US,SURVE,H11534

b. M_NSYS attributes: INFORM: H11534; MARSYS: IALA B; SORDAT: 05052007; SORIND: US,US,SURVE,H11534
c. M_QUAL attributes: CATZOC: A2; INFORM: H11534; POSACC:10; SORIND: US,US,SURVE,H11534; SORDAT:05052007; SUREND: 05052007; SURSTA: 06142006

Notes:

1) The northern corner of this survey falls within the confines of chart 11481 which is at a 1:25,000 scale. The rest of the survey lies in 11476 at 1:80,000. Given the larger scale of 11481 the sounding selection for that portion of the survey is at a much higher density than the rest of the survey.

2) The disproved AWOIS Item has differing positions between the chart 11476 and the ENC. The ENC position is about 300 meters south / south-east of the raster position.

3) The DtoN located in the dumping ground, least depth 41 feet, is going to be changed into a 41-foot sounding and removed as a DtoN.

APPROVAL SHEET
H11534

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development 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 NOS requirements except where noted in the Evaluation Report.

Richard Sullivan
2008.02.26
15:13:59 -05'00'

Richard M. Sullivan
Hydrographic Intern
Atlantic Hydrographic Branch

All final products have undergone a comprehensive review as per the Atlantic Hydrographic Branch Processing Manual and are verified to be accurate and complete except where noted in the Evaluation Report.

Nicholas A. Forfinski
Physical Scientist
Atlantic Hydrographic Branch

I have reviewed the Base Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Approved:

Shepard Smith
I am approving this document
2008.02.27 18:34:07 -05'00'

LCDR Shepard Smith, NOAA
Chief, Atlantic Hydrographic Branch

Jeremy McHugh

Digitally signed by Jeremy McHugh
DN: cn=Jeremy McHugh, c=US
Reason: I am approving this document
Date: 2008.02.29 17:24:31 -05'00'