H12279

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No.

Registry No. H12279

LOCALITY

State Florida

General Locality Fernandina

Sublocality Approach to St. Marys

2011

CHIEF OF PARTY
Robert W. Ramsey Jr. , NOAA NRT 2

LIBRARY & ARCHIVES

DATE

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

HYDROGRAPHIC TITLE SHEET

REGISTRY No

H12279

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 **Florida**

General Locality **Fernandina**

Sub-Locality **Approach to St. Marys**

Scale **1:10000** Date of Survey **02/28/2011 to 05/09/2011**

Instructions dated **12/22/2010** Project No. **S-G904-NRT2-10**

Vessel **NOAA Launch 1210 Navigation Response Team 2**

Chief of party **Robert W. Ramsey Jr. NOAA NRT 2**

Surveyed by **NOAA NRT 2**

Soundings by **ODOM Echotrac CV single-beam**

SAR by **Adam Argento** Compilation by **Fernando Ortiz**

Soundings compiled in **Feet**

REMARKS: **All times are UTC. UTM Zone 17**

The purpose of this survey is to provide contemporary surveys to update National Ocean Service (NOS) nautical charts. All separates are filed with the hydrographic data. Revisions and end notes in red were generated during office processing. The processing branch concurs with all information and recomendations in the DR unless otherwise noted. Page numbering may be interrupted or non sequential.

All pertinent records for this survey, including the Descriptive Report, are archived at the National Geophysical Data Center (NGDC) and can be retrieved via http://www.ngdc.noaa.gov/.

Descriptive Report to Accompany Survey H12279

Project: S-G904-NRT2-10

Locality: Fernandina Sublocality:

Approach to St. Marys Scale:

1:10,000

February 2011 - May 2011

Navigation Response Team 2

Chief of Party: Robert W. Ramsey Jr.

A Area Surveyed

Hydrography shall consist of Navigable Area Surveys in accordance with the following support documents. Data from surveys is intended to supersede all prior survey data in the common area.

NW quadrant of the Surveyed area is randomly used by the Fernandina Beach Pilots as an anchorage area for shallower draft vessels (~8m draft). Advanced information sounding plots were provided.

A.1 Survey Limits

Data was acquired within the following survey limits:

Northwest Limit	Southeast Limit
30.7339973889 N 81.3629846944 W	30.6959512222 N 81.282504 W

Table 1: Survey Limits

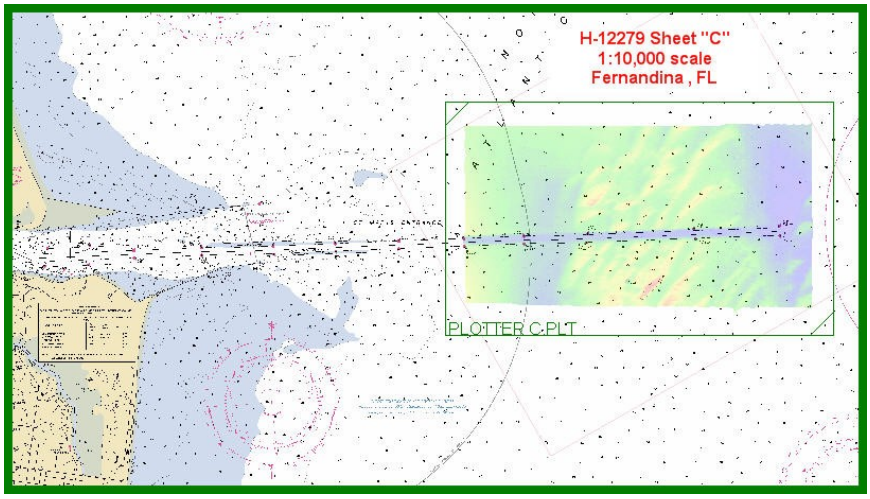


Figure 1: H-12279, 2011 Survey Coverage

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

A.2 Survey Purpose

The Port of Fernandina Beach, FL is listed as one of the 175 US seaports in MTS port list. Fernandina Beach is a port city on Amelia River in the Cumberland Sound. Fernandina Beach has a large shrimping boat fleet and ships out wood pulp and paper products. St. Marys Entrance and Cumberland Sound was last surveyed in 2001 by USN. There is a naval submarine support base in Kings Bay. Due to the date of the last survey and that Fernandina is on the MTS port list, NRT 2 is assigned a basic hydrographic survey in the assigned survey area. It is the intent of this survey to supersede all bathymetry, seafloor features, and bottom characteristics within the assigned survey area as defined by these instructions for updating of NOAA charts 11503 and 11504. The N.A.L.L. line for this project is defined as the 4 meter depth contour.

A.3 Survey Quality

The entire survey is adequate to supersede previous data.

Last surveys in the area were 1970-1998 partial bottom coverage, and USCOE channel soundings.[1]

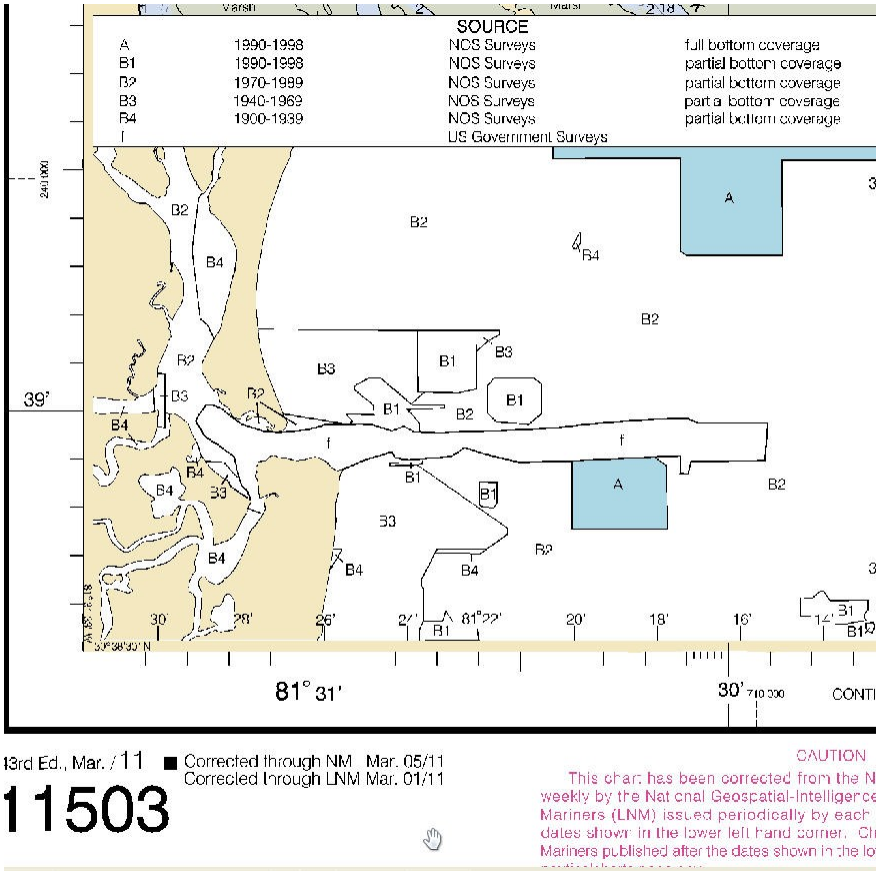


Figure 2: Prior Survey Coverage

A.4 Survey Coverage

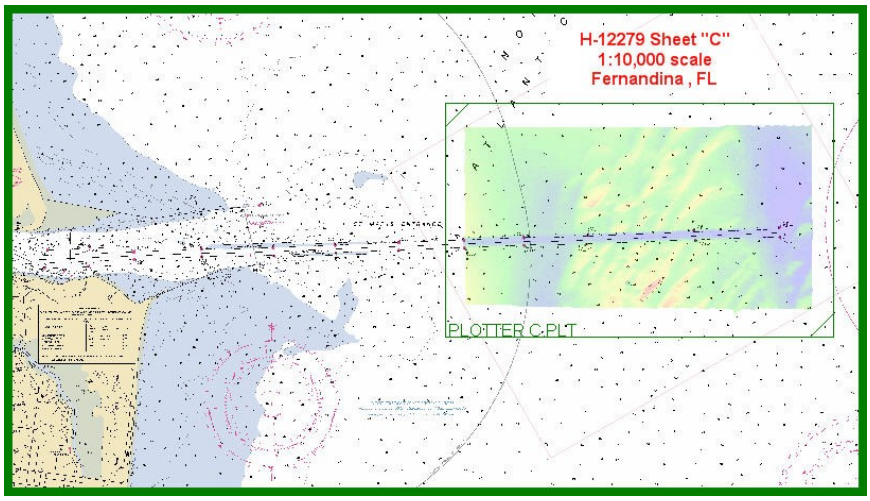


Figure 3: H-12279 Survey Coverage

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	*1210*	*Total*
LNM	**SBES Mainscheme**	22.43	22.43
	MBES Mainscheme	0.00	0.00
	Lidar Mainscheme	0.00	0.00
	SSS Mainscheme	0.00	0.00
	SBES/MBES Combo Mainscheme	0.00	0.00
	SBES/SSS Combo Mainscheme	253.36	0.00
	MBES/SSS Combo Mainscheme	0.00	253.36
	SBES/MBES Combo Crosslines	18.86	18.86
	Lidar Crosslines	0.00	0.00
Number of Bottom Samples			63
Number of DPs			12
Number of Items Items Investigated by Dive Ops			0
Total Number of SNM			7.74

Table 2: Hydrographic Survey Statistics

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

Survey Dates
02/28/2011
03/01/2011
03/16/2011
03/17/2011
03/21/2011
03/22/2011
03/23/2011
04/04/2011
04/07/2011
04/11/2011
04/12/2011
04/13/2011
04/14/2011
04/18/2011
04/19/2011
04/25/2011
05/03/2011
05/09/2011

Table 3: Dates of Hydrography

A.6 Shoreline

Shoreline was investigated in accordance with the Project Instructions and the HSSD.[2]

A.7 Bottom Samples

No specific requirements were set outside of standard directives. Extensive samples were taken due to the usage of the northern area of the survey area for commercial anchorage by Fernandina Pilots.[3]

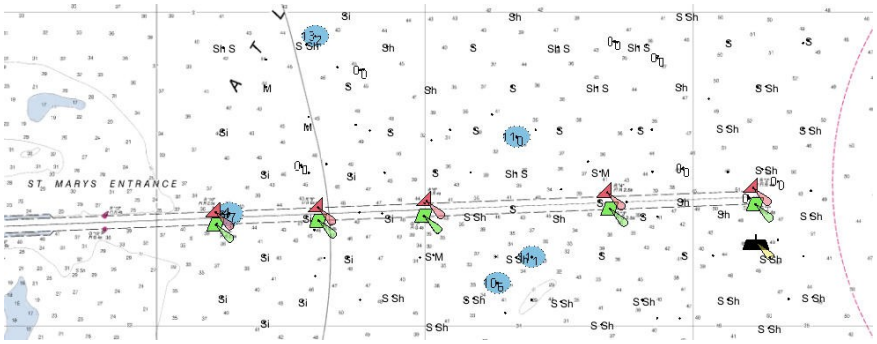


Figure 4: Bottom Samples H-12279

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	***S-1210***
LOA	9.144 meters
Draft	0.5 meters

Table 4: Vessels Used

Figure 5: S-1210 on trailer

Hydrographic Surveys and Emergency Response work.

B.1.2 Equipment

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

Manufacturer	Model	Type
Sea Bird Electronics	SBE 19	Sound Speed System
Odom Hydrographic	Digi Bar Pro	Sound Speed System
Applanix	POS MV VI	Positioning System
Applanix	POS MV IV	Vessel Attitude System
Odom Hydrographic	CV2	SBES
Klein	3000	SSS

Table 5: Major Systems Used

No Deviations of equipment, or procedures from those listed in the DAPR were used.

B.2 Quality Control

B.2.1 Crosslines

Agreement was good.[4] See "H12279 Survey Crosslines Report" located in Separates IV. Checkpoint_Summary_&_Crossline_Comparisons

B.2.2 Uncertainty

Hull ID	Measured - CTD	Measured - MVP	Surface
S-1210	0	0	4.000[5]

Table 6: Survey Specific Sound Speed TPU Values

Minimal uncertainty areas were noted, when noted were in irregular bottom conditions.

Tidal Constituent And Residual Interpolator (TCARI) automatically calculates the error associated with water level interpolation. This error is incorporated into the residual/harmonic solutions and included in the Total Propagated Error (TPE) for the survey.

B.2.3 Junctions

There are no contemporary surveys that junction with this survey.[6]

B.2.4 Sonar QC Checks

No Deviations from DAPR were noted. Daily checks against known contacts and buoy blocks were conducted during the survey.

B.2.5 Heavy Biological noise from fish schools were noted throughout the area. Tidal noise was evident as well. Shrimp trawl activities were most notable on the western half of the Survey limits.[7]

Notable noise as described above was evident during survey acquisition. Due to the consistency of these factors, they could not be avoided. Where fish school noise were the cause of wash out of portions of the SSS records, the affected areas were cross-checked with the second full coverage data set (100,200%).

Tidal noise effects were minimized by gate filtering of the fish altitude, and manual edits of bottom tracking loss when it occurred.

Entrance work in the SE United States always has these environmental factors during this time of year (Fish Schools, Shrimp Trawls). These are dealt with as best as they can be. All work is reviewed for unusable data, and it is re-ran when warranted.

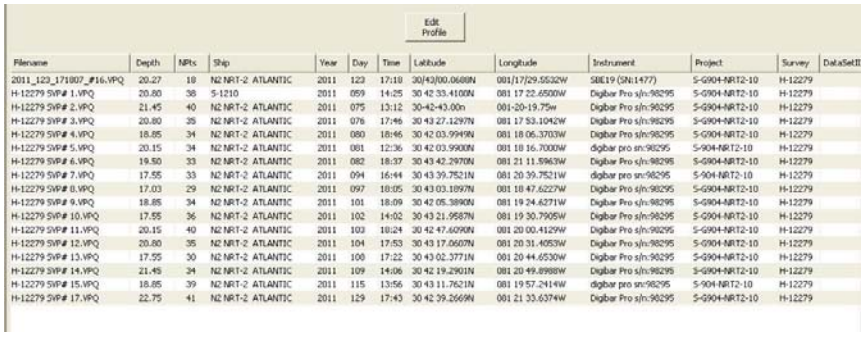
B.2.6 Heavy Biological noise from fish schools were noted throughout the area. Tidal noise was evident as well. Shrimp trawl activities were most notable on the western half of the Survey limits.

Notable noise as described above was evident during survey acquisition. Due to the consistency of these factors, they could not be avoided. Where noise induced momentary bottom loss, the digital records were edited to reflect the true bottom by interpretation of the graphic records at these instances.[8]

B.2.7 Sound Speed Methods

Sound Speed Cast Frequency: Normal daily casts were taken for each day of survey acquisition with a Digi Bar Pro SVP. Dual casts were taken, with 2 SVP Probes, weekly for a DQA on the SVP instrument, all passed. See "H-12279.DQA.txt" located in the Separates II.

Full water column casts were taken in the direct survey area planned for those days work. All casts were incorporated in a single Caris SVP cast, and applied by "Closest in Time"; All cast data has been loaded into the PSS.



Filename	Depth	NPts	Ship	Year	Day	Time	Latitude	Longitude	Instrument	Project	Survey	DataSetII
2011_123_171807_#16.VPQ	20.27	18	N2 NRT-2 ATLANTIC	2011	123	17:18	30/43/00.0688N	081/17/29.5532W	SBE19 (SN:1477)	S-G904-NRT2-10	H-12279	
H-12279 SVP# 1.VPQ	20.80	38	S-1210	2011	059	14:25	30 42 33.4100N	081 17 22.6500W	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	
H-12279 SVP# 2.VPQ	21.45	40	N2 NRT-2 ATLANTIC	2011	075	13:12	30-42-43.00n	001-20-19.75w	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	
H-12279 SVP# 3.VPQ	20.80	35	N2 NRT-2 ATLANTIC	2011	076	17:46	30 43 27.1297N	081 17 53.1042W	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	
H-12279 SVP# 4.VPQ	18.85	34	N2 NRT-2 ATLANTIC	2011	080	18:46	30 42 03.9949N	081 18 06.3703W	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	
H-12279 SVP# 5.VPQ	20.15	34	N2 NRT-2 ATLANTIC	2011	081	12:36	30 42 03.9900N	081 18 16.7000W	digbar pro sn:98295	S-904-NRT2-10	H-12279	
H-12279 SVP# 6.VPQ	19.50	33	N2 NRT-2 ATLANTIC	2011	082	18:37	30 43 42.2970N	081 21 11.5963W	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	
H-12279 SVP# 7.VPQ	17.55	33	N2 NRT-2 ATLANTIC	2011	094	16:44	30 43 39.7521N	081 20 39.7521W	digbar pro sn:98295	S-904-NRT2-10	H-12279	
H-12279 SVP# 8.VPQ	17.03	29	N2 NRT-2 ATLANTIC	2011	097	18:05	30 43 03.1097N	081 18 47.6227W	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	
H-12279 SVP# 9.VPQ	18.85	34	N2 NRT-2 ATLANTIC	2011	101	18:09	30 42 05.3890N	081 19 24.6271W	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	
H-12279 SVP# 10.VPQ	17.55	36	N2 NRT-2 ATLANTIC	2011	102	14:02	30 43 21.9587N	081 19 30.7905W	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	
H-12279 SVP# 11.VPQ	20.15	40	N2 NRT-2 ATLANTIC	2011	103	18:24	30 42 47.6090N	081 20 00.4129W	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	
H-12279 SVP# 12.VPQ	20.80	35	N2 NRT-2 ATLANTIC	2011	104	17:53	30 43 17.0607N	081 20 31.4053W	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	
H-12279 SVP# 13.VPQ	17.55	30	N2 NRT-2 ATLANTIC	2011	100	17:22	30 43 02.3771N	081 20 44.6530W	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	
H-12279 SVP# 14.VPQ	21.45	34	N2 NRT-2 ATLANTIC	2011	109	14:06	30 42 19.2901N	081 20 49.8988W	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	
H-12279 SVP# 15.VPQ	18.85	39	N2 NRT-2 ATLANTIC	2011	115	13:56	30 43 11.7621N	081 19 57.2414W	digbar pro sn:98295	S-904-NRT2-10	H-12279	
H-12279 SVP# 17.VPQ	22.75	41	N2 NRT-2 ATLANTIC	2011	129	17:43	30 42 39.2669N	081 21 33.6374W	Digbar Pro s/n:98295	S-G904-NRT2-10	H-12279	

Figure 6: SVP Cast Listing

B.2.8 Coverage Equipment and Methods

No Deviations from DAPR were noted.

B.2.9 Junctions

No Junctions were assigned in the Project of Instructions; therefore there is no table for this part.[9]

B.3 Echo Sounding Corrections

B.3.1 Corrections to Echo Soundings

No Deviations from DAPR were noted.

B.3.2 Calibrations

All sounding systems were calibrated as detailed in the DAPR.

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.

B.5.1 Surfaces

The following CARIS surfaces were submitted to the Processing Branch:

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose

Table 7: CARIS Surfaces

One, 1m base was created for the VBES data (H12279_VBES_1mB), and One, Final Base was generated (H12279_VBES_1mB_Final).[10]

This is a 200% SSS coverage with VBES sound data collected. As per discussions with AHB,[11] these are the only requested Base's to be generated and submitted.

B.5.2 Partial Missing True Heave Data DN:109 04/19/2011

The first part of the day failed to log the POS .000 file. Sea state was minimal, and the heave data exist in the Hypack data file. Review of condition and data, the Hydrographer retained this data and fully processed it for use.

The POS true heave file was not logged during the early part of the day. It was started when it was noted for the remainder of the day. The sea state during this non-logged time was minimal, and all data was judged to be usable, with no ill effects.[12] All RAW POS data can be found in the raw Hypack line files.

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:

TCARI

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

Station Name	Station ID
Fernandina Beach	8720030

Table 8: NWLON Tide Stations

File Name	Status
8720030.tid	Verified Observed

Table 9: Water Level Files (.tid)

File Name	Status
G904NRT22011_working.tc	Final

Table 10: Tide Correctors (.zdf or .tc)

A request for final approved tides was sent to N/OPS1 on 05/18/2011. The final tide note was received on 05/25/2011.[13]

Note: The Project of Instructions is 2010, Tides used are 2011.[14]

The Project of Instructions for this Project was dated 2010, and associated reports, and instrument calibration were conducted in DEC 2010. All tide data and the TCARI .tc file were 2011 as provided by COOPs. NRT2 standard practice is to name the .tc file as a "working" file, so as to always have the original. Only verified tides are downloaded and applied to the data.

C.2 Horizontal Control

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

The Above listed USCG Base station supplied the RTCM correctors to the POS M/V4 System.[15]

The following DGPS Stations were used for horizontal control:

DGPS Stations
Savannah, GA RBn Antenna Location: 32 08.40, 081 42.00 REFSTA Ant Location (A):32 08.31562, 081 41.77985 REFSTA Ant Location (B):32 08.32272, 081 41.79521 REFSTA RTCM SC-104 ID (A):36 REFSTA RTCM SC-104 ID (B):37 Broadcast Site ID:818 Transmission Frequency:319 KHZ Transmission Rate:100 BPS Signal Strength:75uV at 228KM

Table 11: USCG DGPS Stations

C.3 Additional Horizontal or Vertical Control Issues

3.3.1 Military DGPS SAT Testing

US Military DGPS service test were being conducted during the course of this survey. No abnormal effects were observed, however cannot be ruled out entirely.[16]

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	LNM Date	NM Date
11503	1:25000	43	03/2011	09/14/2010	04/09/2011

Table 12: Largest Scale Raster Charts

11503

This chart was used exclusively for chart comparison due to scale, and direct correlation to the US5GA18M ENC product reviewed.

In general, sounding agree within 2-6ft. Large areas of shoaling were noted, lining on an SW/NE axis perpendicular to the normal wave and sea set of NW in the survey area. All soundings from survey H12279 should supersede those on the RNC. [17]

Currently charted offshore 30ft shoals appear to be reseeding in area, though the shoal soundings are retained.[18]

Sounding north of the ship channel, appear to be deeper than those currently charted, while those south of the channel show consistency.[19]

D.1.2 Electronic Navigational Charts

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

ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US5GA18M	1:25,000	16	04/12/2011	04/12/2011	NO

Table 13: Largest Scale ENCs

US5GA18M

This ENC Cell was reviewed in the common survey area. Soundings do not agree in large areas, with current survey soundings tending to be deeper by 1-3m, although shoaler by as much in other areas. All soundings from survey H12279 should supersede those on the ENC Cell.[20]

D.1.3 AWOIS Items

No Awois were assigned within the survey limits.

D.1.4 Charted Features

None exist within the survey limits.

D.1.5 Uncharted Features

No Uncharted Features from outside sources were received.

D.1.6 Dangers to Navigation

Dangers to Navigation Reports are included in Appendix I of this report.[21]

Figure 8: Wave Buoy (DTON)

D.1.7 Shoal and Hazardous Features

One charted 35 ft Obstn located at 30/42/16.42N 081/19/27.60W, was addressed, and validated.[22] (fig 9)
A charted 30ft shoal in the vicinity of 30°42'10.049", -081°19'12.254" was developed. This shoal is receding in size, however still reflects depths of 28ft.[23] (fig 10)

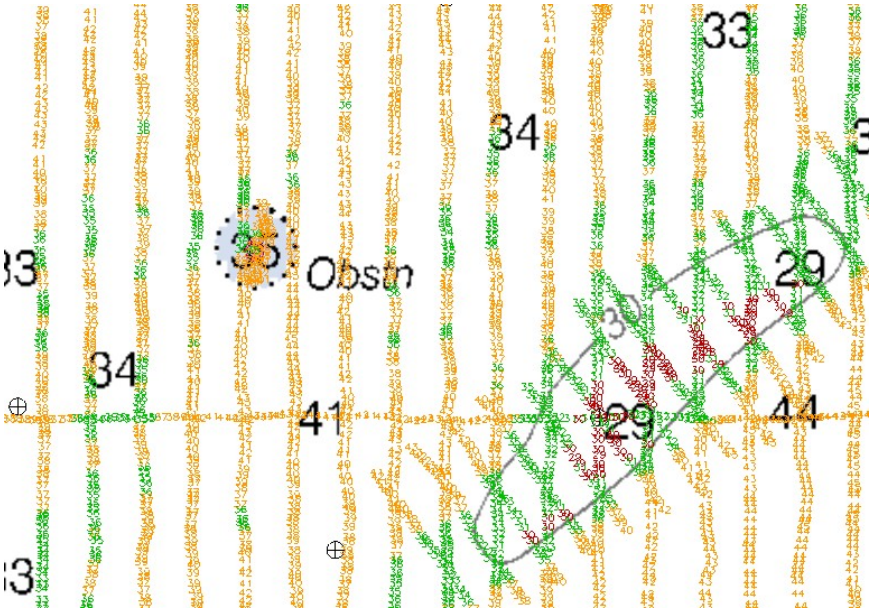


Figure 9: 35 ft Obstn

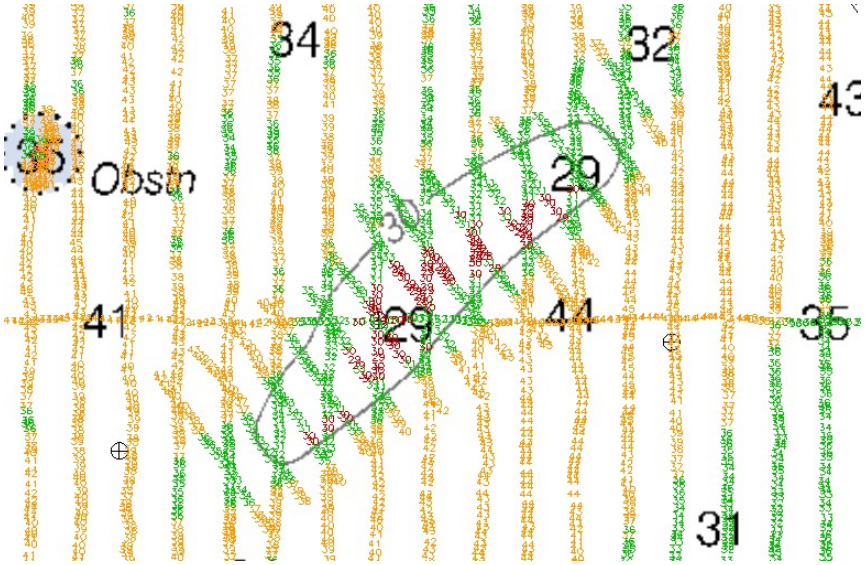


Figure 10: 30ft Shoal

D.1.8 Channels

The main shipping channel Tabulation Table list 46ft project depth. LOQ=43.8 , LIQ=45.7 , RIQ=45.0 , ROQ=37.5. The Survey data in general supports these depths. The Range Lights were validated.[24]

Area of 44ft depths exist just offshore of FL R"2" at the entrance (30°42'50.384", -081°17'10.630").[25]

An area of channel encroachment in the vicinity of 30°42'45.105", -081°19'37.334", was developed. (fig 11)

The northern channel wall has the more pronounced slope, with minor intrusions southward into the channel. The Southern channel wall is less pronounced.[26]

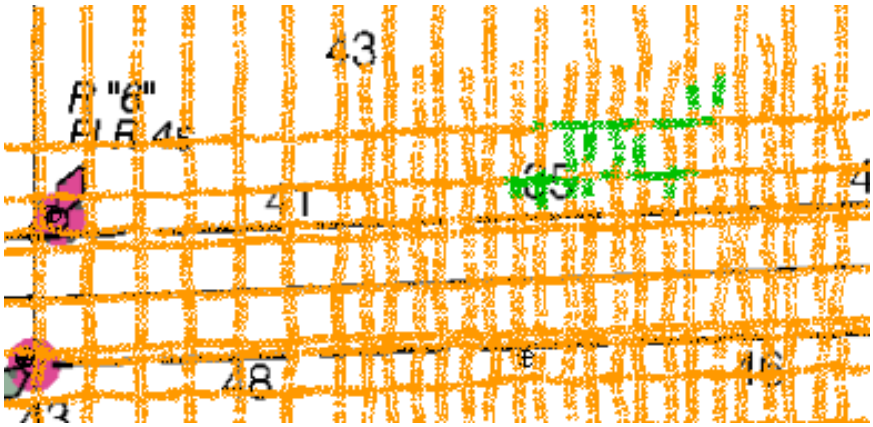


Figure 11: Channel Encroachment

D.2 Additional Results

D.2.1 Shoreline

No Shoreline was investigated in accordance with the Project Instructions and the HSSD.[27]

D.2.2 Prior Surveys

No prior surveys were listed in the Project Instructions for address.

D.2.3 Aids to Navigation

All ATONs were positioned for verification. All ATONs were found to serve their intended purpose. There is no LT GC"5" , it appears to have been omitted for the GC"7" instead. An ATON report was generated, and can be found in Appendix V.[28]

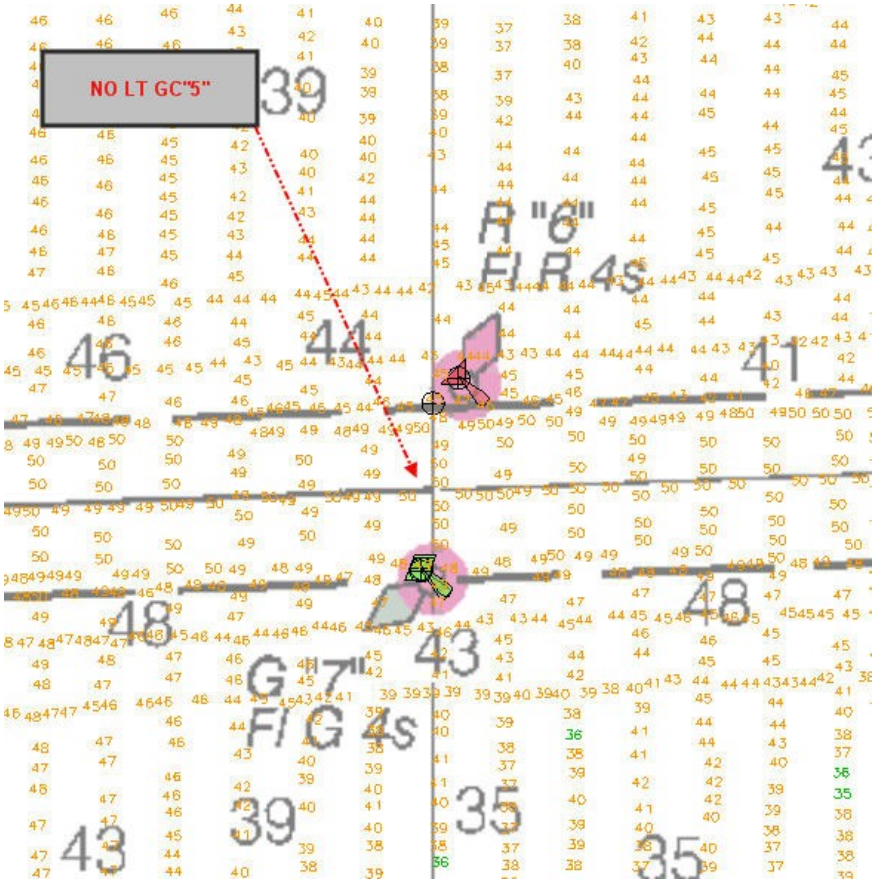


Figure 12: Missing LT GC "R5" Buoy

D.2.4 Overhead Features

None exist.

D.2.5 Submarine Features

None exist.

D.2.6 Ferry Routes and Terminals

None exist.

D.2.7 Platforms

None exist.

D.2.8 Significant Features

SSS OPS noted divergent areas in the bottom topography in the northern section of the survey. When the bottom samples are overlaid on the SSS mosaic, these areas were verified to be large shell fields, by bottom sample comparisons.[29]

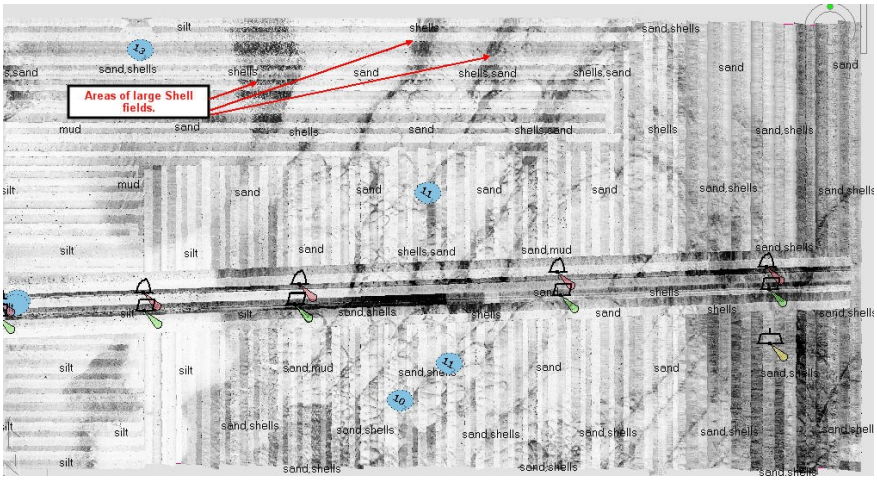


Figure 13: Shell Fields.

D.2.9 Construction and Dredging

Dredge operation were ongoing for a beach replenishment job during this survey. These operations did not directly affect the survey area, other than inducing minor turbidity.[30]

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.

Please review this document while having the PSS open in Pydro, to fully understand all data and the corrilation to this report and supporting documents.

Approver Name	Approver Title	Approval Date	Signature
Robert W Ramsey Jr	Chief of Party	05/31/2011	Robert W Ramsey Jr Digitally signed by Robert W Ramsey Jr DN: cn=Robert W Ramsey Jr, o=USDOC/NOAA/NOS/NRB, ou=ARRT-2, email=Robert.Ramsey@NOAA.GOV, c=US Date: 2011.11.29 14:10:23 Z

Revisions and Corrections Performed During Office Processing and Certification

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[1] The latest chart has been updated with the latest controlling depths. (June 2011).
[2] Do not concur. Within the survey limits of H12279 there was no shoreline for investigation.
[3] Sixty-one bottom samples are included in the HCell to be charted. There were no charted bottom samples to be retained within the survey limits of H12279.
[4] Concur with clarification. Crossline agreement with mainscheme lines were within specifications
[5] Surface sound speed uncertainty used was 4m/s.
[6]Do not concur. Survey H12279 junctions with survey H12275 to the West.
[7] Concur with clarification. Data is adequate and within specification to supersede charted data. Chart per HCell.
[8] Data is adequate and within specifications to supersede charted data in the common area. Chart per HCell.
[9] Concur with clarification. This survey junction with H12275 to the west as stated in the Project of Instructions.
[10] A 4-meter resolution VBES uncertainty surface was created during SAR review and was used for the basis of the bathymetric compilation of H12279. The surface intended for compilation is H12279_4m_SAR_Final.
[11] This survey was submitted to reviewed, and compiled at the Pacific Hydrographic Branch.
[12] Data is adequate and within specifications to supersede charted data in the common area. Chart per HCell.
[13] Tide note is appended to this report.
[14] The Project Instructions area dated December 2010. The final Tide note is dated May 2011.
[15] See table 11 for the US Coast Guard DGPS station used for the horizontal positioning control.
[16] Data is adequate and within specifications to supersede charted data in the common area. Chart per HCell.
[17] Chart soundings per HCell.
[18] Chart soundings per HCell.
[19] Chart soundings per HCell.
[20] Chart soundings per HCell.
[21] The DTON report is attached to this document. The DTON has not been applied to the latest chart, because the ODAS buoy WMO id #41112 Fernandina Beach FL. is continuously changing its position, the latest position on 12/14/2011 is at 30.719 N 81.293 W (30°43'7" N 81°17'34" W) according to the following website http://www.ndbc.noaa.gov/station_page.php?station=41112, In addition, an email correspondence is included in this report.
[22] An obstruction feature was added to the HCell to be retained.
[23] Chart soundings per HCell.
[24] Concur with clarification. See endnote 1.
[25] Chart soundings per HCell.
[26] Chart soundings per HCell.
[27] Concur with clarification. The Project Instructions state that a limited shoreline will be accomplished during data acquisition of H12279. However within the limits of H12279 there was no shoreline for investigation.
[28] Chart ATONS according to the latest ATONIS information.
[29] Chart bottom samples per HCell.
[30] Data is adequate and within specifications to supersede charted data in the common area. Chart soundings per HCell.

New Feature DTON Report

Registry Number: H-12279

State: Florida

Locality: Fernandina Beach

Sub-locality: Approach to St. Marys

Project Number: S-G904-NRT2-10

Survey Date: 03/01/2011

Positioned un-charted wave buoy which has been struck on multible occations. This buoy should be charted.

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
11503	42nd	01/01/2007	1:25,000 (11503_1)	USCG LNM: 9/14/2010 (10/12/2010) NGA NTM: 3/14/2009 (10/16/2010)
11502	31st	01/01/2007	1:80,000 (11502_1)	[L]NTM: ?
11480	40th	03/01/2007	1:449,659 (11480_1)	[L]NTM: ?
11451	33rd	09/01/2007	1:495,362 (11451_17)	[L]NTM: ?
11009	38th	12/01/2006	1:1,200,000 (11009_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	NOAA Wave Buoy 41112	Shoal	15.93 m	30° 42' 32.1" N	081° 17' 31.9" W	---

1 - Danger To Navigation

1.1) NOAA Wave Buoy 41112

DANGER TO NAVIGATION

Survey Summary

Survey Position: 30° 42' 32.1" N, 081° 17' 31.9" W

Least Depth: 15.93 m (= 52.28 ft = 8.713 fm = 8 fm 4.28 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.992 m ; **TVU (TPEv)** ±0.171 m

Timestamp: 2011-060.16:17:22.000 (03/01/2011)

DP Dataset: h12279 / nrt2_1210_dp / 2011-060 / 03012011_wave buoy

Profile/Beam: 1/1

Charts Affected: 11503_1, 11502_1, 11480_1, 11451_17, 11009_1, 411_1

Remarks:

858-534-3032 contact number.

NOAA Wave Buoy operated Scripts Institute

Previously uncharted.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12279/nrt2_1210_dp/2011-060/03012011_wave buoy	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Add buoy to charts.

Cartographically-Rounded Depth (Affected Charts):

52ft (11503_1, 11502_1, 11451_17)

8 ¾fm (11480_1, 11009_1, 411_1)

S-57 Data

Geo object 1: Buoy, special purpose/general (BOYSPP)

Attributes: BOYSHP - 3:spherical

CATSPM - 9:ODAS (Ocean-Data-Acquisition-System)

COLOUR - 6:yellow

CONRAD - 2:not radar conspicuous

SORDAT - 20110301

SORIND - US,US,Survy,H12279

Feature Images

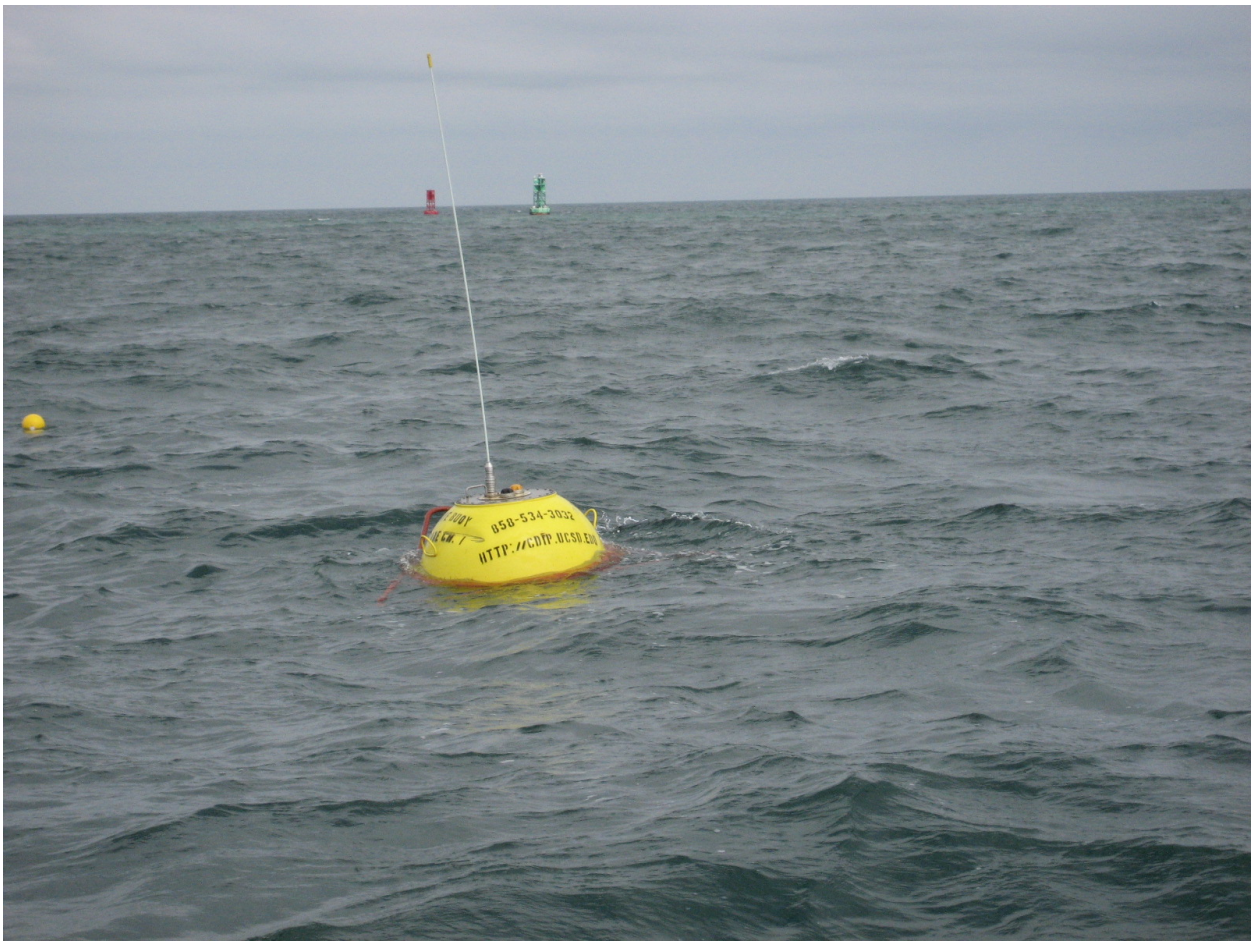


Figure 1.1.1

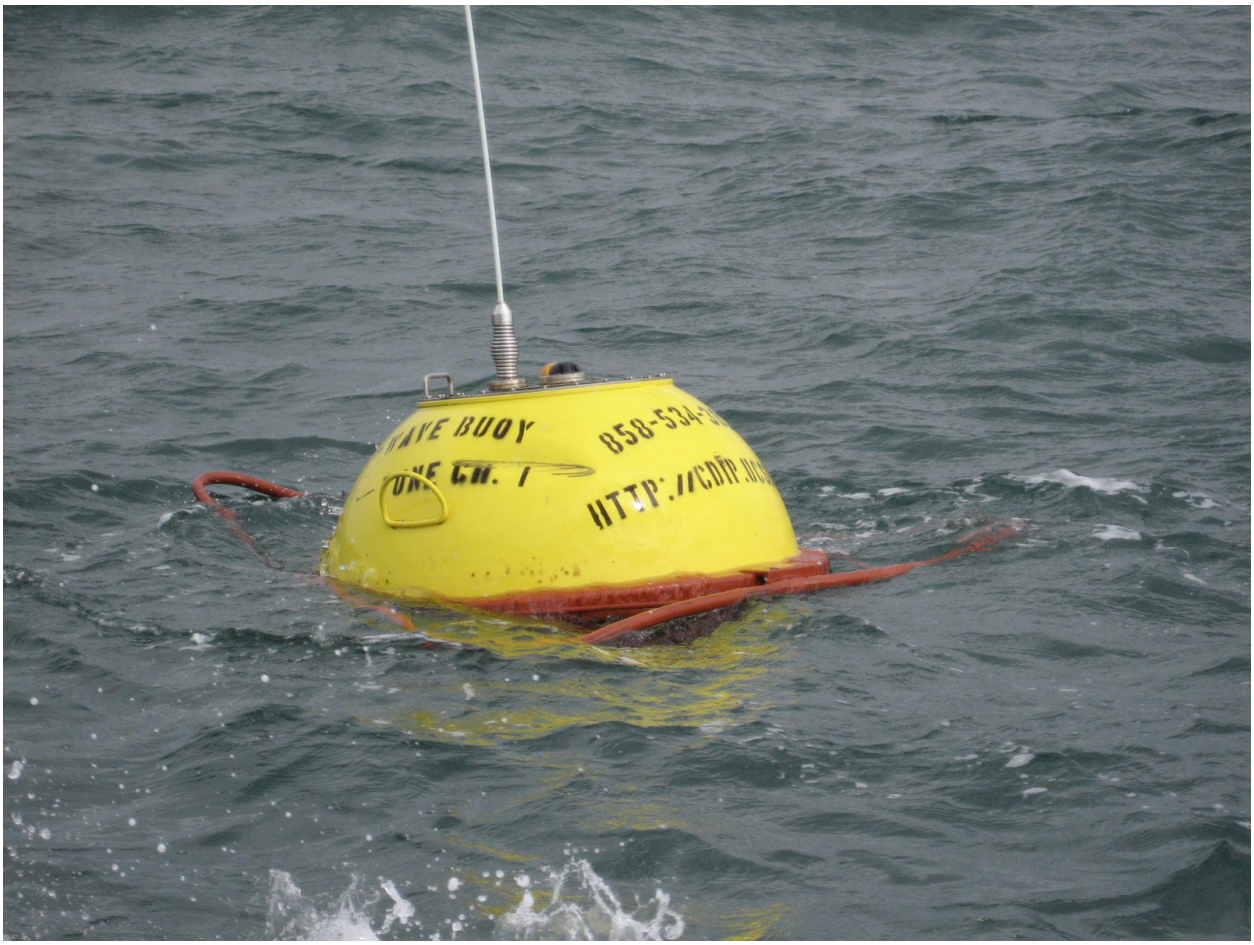


Figure 1.1.2

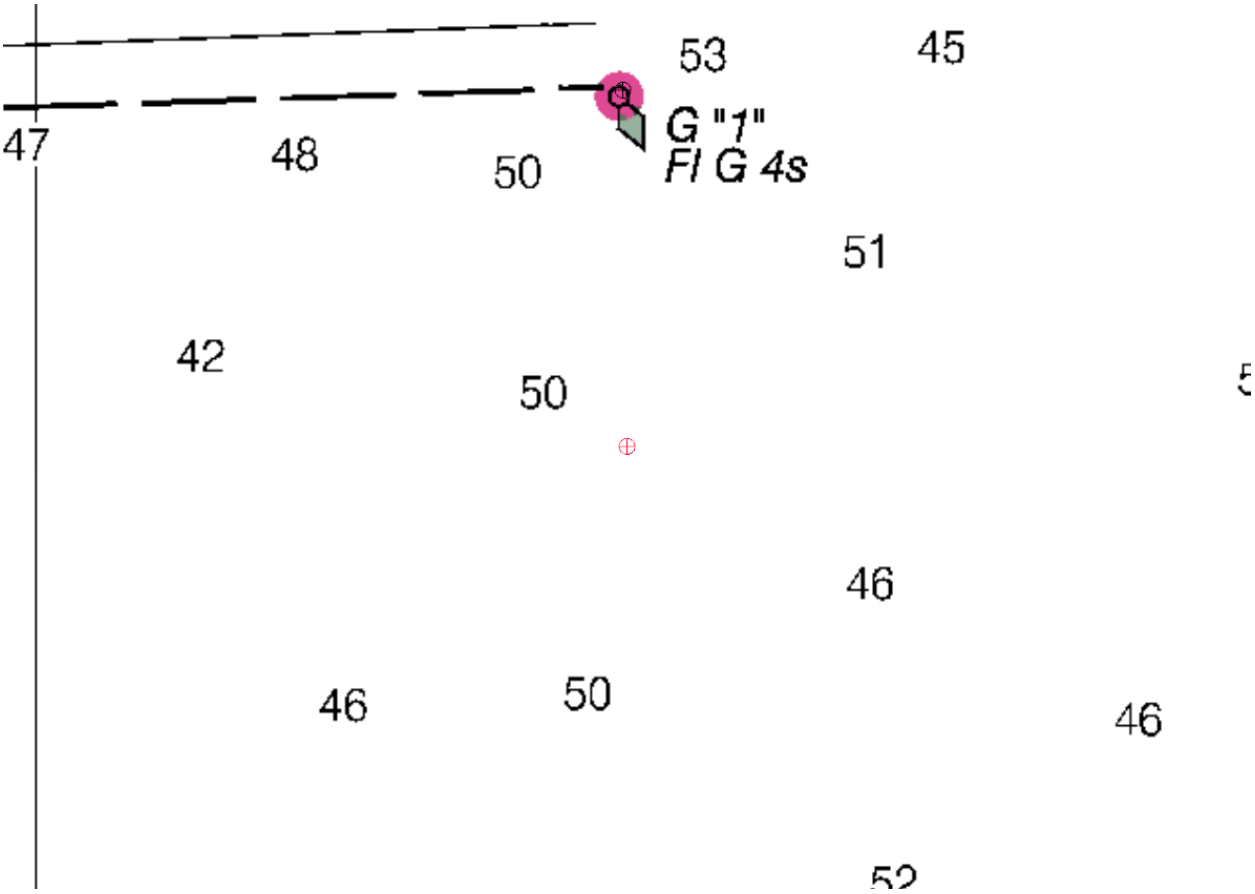


Figure 1.1.3

Subject: Fwd: RE: FW: Fwd: DTON for H12779
From: Tara Wallace <Tara.Wallace@noaa.gov>
Date: 9/21/2011 12:29 PM
To: Crescent Moegling <Crescent.Moegling@noaa.gov>
CC: Lance Roddy <Lance.Roddy@noaa.gov>

Crescent -

FYI on the NOAA Wave Buoy. If you have any questions - touch base with Craig Winn in USB.

Thanks,
Tara
-------- Original Message --------
Subject: RE: FW: Fwd: DTON for H12779
Date: Wed, 21 Sep 2011 14:51:09 -0400
From: Craig Winn <Craig.Winn@noaa.gov>
To: 'David.Riccio' <David.Riccio@noaa.gov>
CC: 'Tara Wallace' <Tara.Wallace@noaa.gov>

Excellent work Dave!

Tara, does this satisfy your requirement?

Craig

From: David.Riccio [mailto:David.Riccio@noaa.gov]
Sent: Wednesday, September 21, 2011 2:09 PM
To: Craig Winn
Subject: Re: FW: Fwd: DTON for H12779

Craig,

As I mentioned before, this was in the Power Squadron queue and of course this isn't Power Squadron source.

ODAS buoy 41112 is now at **30°43' 07" N 81°17'34" W**, which is north of 30-42-32.100 081-17-31.900 as observed by the survey crew. It is no longer at the observed position.

Source is here
http://www.ndbc.noaa.gov/station_page.php?station=41112

I am going to chart it but the letter L309-2011 will not be used as the source because the position has changed. I will write a NW using the Light List as my source.

David

On 9/21/2011 10:09 AM, Craig Winn wrote:
Hey Dave,

Look into this as soon as you can, I would like to give Tara an update. Thanks,

Craig

From: Tara Wallace [mailto:Tara.Wallace@noaa.gov]
Sent: Friday, September 16, 2011 9:00 AM
To: Craig Winn; Crescent Moegling
Cc: Doug Baird; ocs.ndb
Subject: Fwd: Fwd: DTON for H12779

Craig -

The following DTON was registered in March, L309/11 and DD-19542 for USB application. I notice that the documents have been assigned in DREG. What is the status of chart application for a NOAA Wave Buoy?

Thanks,

Tara

-------- Original Message --------
Subject: Fwd: DTON for H12779
Date: Fri, 16 Sep 2011 07:37:22 -0400
From: lance.roddy <Lance.Roddy@noaa.gov>
To: Tara Wallace <Tara.Wallace@noaa.gov>

FYI

-------- Original Message --------
Subject: DTON for H12779
Date: Thu, 15 Sep 2011 14:55:10 -0700
From: Crescent Moegling <Crescent.Moegling@noaa.gov>
To: OCS.NDB@noaa.gov, "lance.roddy" <Lance.Roddy@noaa.gov>

Do you know if MCD received the DTON submitted by NRT2 on March 11, 2011? I've attached it for your review. It doesn't appear to be applied to the most current charts affected. Any clarification you can provide is greatly appreciated.

--
Crescent Moegling
Hydrographic Team Lead
Pacific Hydrographic Branch
206.526.6840

Tara Wallace
Chief, Nautical Data Branch
Marine Chart Division

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, 2011

HYDROGRAPHIC BRANCH: Pacific
HYDROGRAPHIC PROJECT: S-G904-NRT2-2010
HYDROGRAPHIC SHEET: H12279

LOCALITY: Approaches to St. Marys, Fernandina Beach, FL
TIME PERIOD: Feb. 28 - May 9, 2011

TIDE STATION USED: 872-0030 Fernandina Beach, FL
Lat. 30° 40.3'N Long. 81° 27.9'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.892 meters

REMARKS: RECOMMENDED GRID

Please use the TCARI grid "G904NRT22011.tc" as the final grid for project S-G904-NRT2-2010, H12279, during the time period between Feb. 28 and May 9, 2011.

Refer to attachments for grid information.

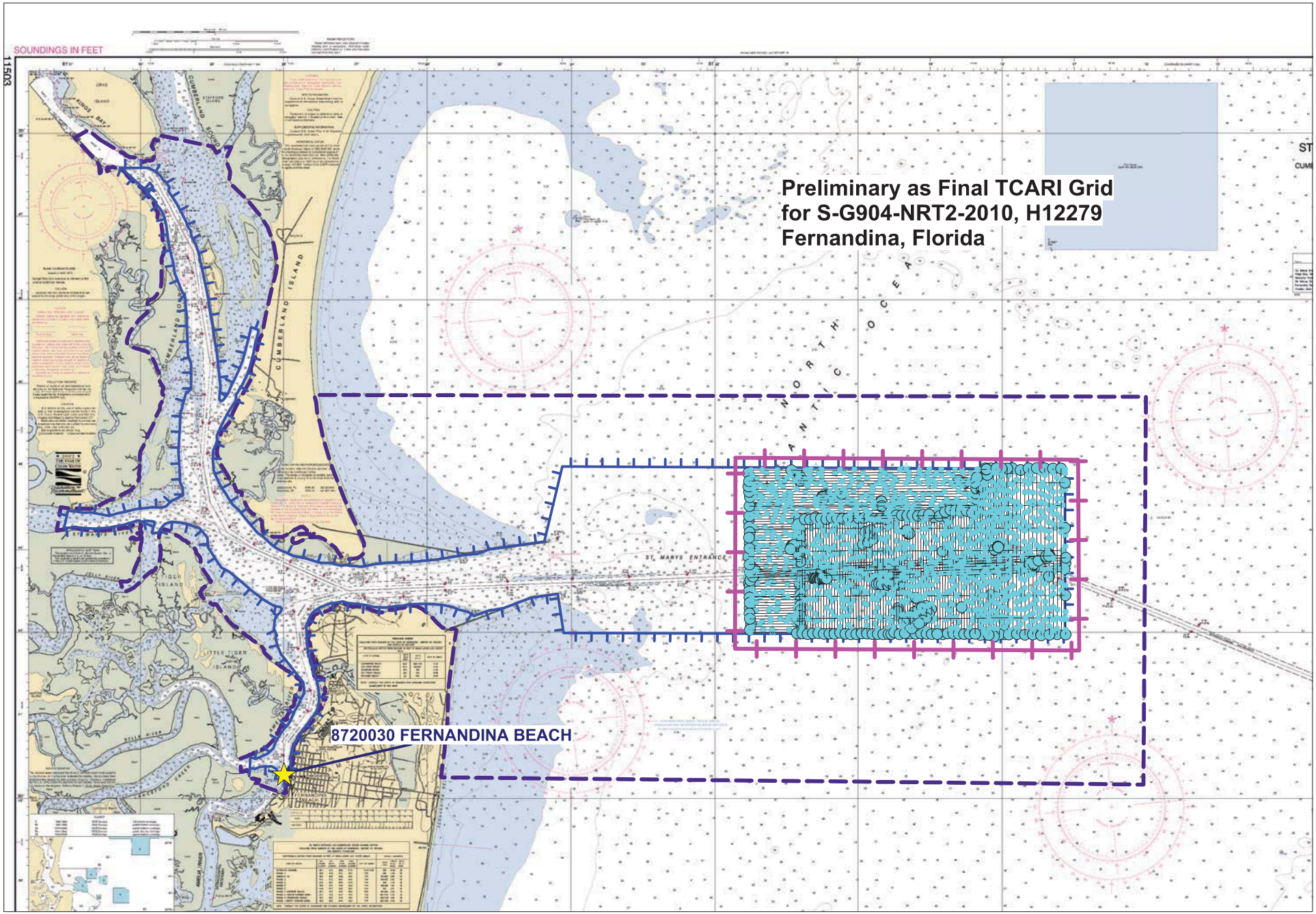
Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time on the 1983-2001 National Tidal Datum Epoch (NTDE).

Note 2: In FY11, OCS/NSD only provided the NRT2 with CO-OPS Project Instructions (PIs) and TCARI grid for S-G904-NRT2-2011 and did not provide updated OCS/NSD FY11 PIs. Therefore, the NRT2 conducted the FY11 survey under NSD's FY10 PIs and CO-OPS FY11 PIs and submitted the final tide requests with project number S-G904-NRT-2010.

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: 2011.05.27 13:57:44 -04'00'

CHIEF, PRODUCTS AND SERVICES BRANCH


SOUNDINGS IN FEET
Preliminary as Final TCARI Grid
for S-G904-NRT2-2010, H12279
Fernandina, Florida
8720030 FERNANDINA BEACH
CUMBERLAND ISLAND
ATLANTIC OCEAN
ST. MARYS ENTRANCE

PHB Compilation Log

General Survey Info

Survey Number	H12279	Field Unit	NRT 2	State	FL	UTM Zone	17N
Project Number	S-G904-NRT2-10	Project Name (Locality)	Fernandina, FL.				
Start Date	02/28/2011	Sublocality	Approach to St. Marys				
End Date	05/09/2011	Survey Scale	1:10000	Compilation Scale	1:25000		

Affected Raster Charts

Chart	KAPP	Scale	Edition	Date	NTM Date
11503	199	1:25000	43	03/01/2011	10/22/2011

Add Chart | Remove Chart

Affected Electronic Charts

ENC	Scale
US5GA18M	1:25000

Add ENC | Remove ENC

Spatial Reference

Horizontal Datum	WGS84
Coordinate System	LLDG
Sounding Datum	MLLW
Vertical Datum	MHW

Junction Surveys

Survey Number	Survey Date	Location Relative to Current Survey
H12275	01/01/2011	West

Add Survey | Remove Survey

PHB Compilation Log

Processing Info

HCell Compiler	Fernando Ortiz	QC Reviewer	Martha Herzog	SAR Reviewer	Adam Argento

Source Surfaces	
Resolution	File Name
4m	H12279_4m_SAR_Final.csar

Add Surface | Remove Surface

Supporting Documents	
Name	Version
Specs and Deliverables	April 2011
HCell Specs	6.1

Add Doc | 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	5.1	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	H12279_CS.00
Survey Scale HCell	H12279_SS.000
HCell Report for MCD	H12279_HR.pdf
Feature Listing	H12279_FL.txt
Descriptive Report	H12279_DR.pdf
Survey Outline	H12279_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)	Feet
Height Units (HUNI)	Feet
Positional Units (PUNI)	Meters

PHB Compilation Log

Radius Setting

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.

Radius (mm)	Min. Depth (m)	Max Depth (m)
3	-4.7	10
4	10	20
4.5	20	50
5	50	500

Contours

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.

Charted Contours	Metric Equivalent	Metric- NOAA Rounded	Chart Contours - NOAA Rounded
30ft	9.144	9.3726	30.75

Add Contour | Remove Contour

Additional Info

Contact Information

Inquiries regarding this HCell content or construction should be directed to:

HCell Compiler: Fernando Ortiz

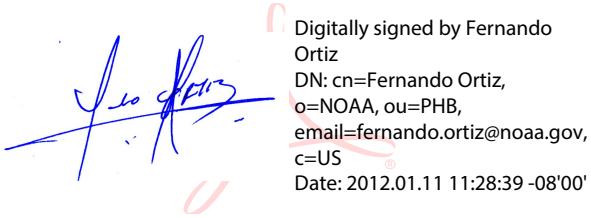
Phone Number: 206.526.6859

Email: fernando.ortiz@noaa.gov

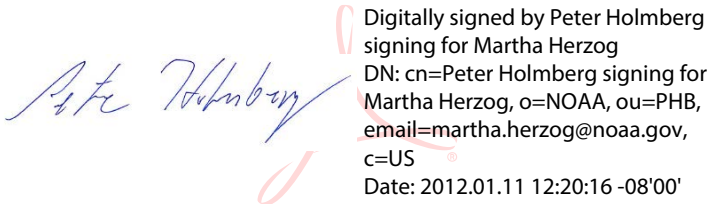
Compilation Comments

APPROVAL SHEET
H12279

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 disproval 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.