

D00173

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey **Reconnaissance**

Registry No. **D00173**

LOCALITY

State **Virginia**

General Locality **Approaches to Chesapeake Bay**

Sub-locality **Vicinity of Tail of the Horseshoe**

2012

CHIEF OF PARTY
LCDR Benjamin K. Evans

LIBRARY & ARCHIVES

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. Any revisions to the Descriptive Report (DR) generated during office processing are shown in bold red italic text. The processing branch maintains the DR as a field unit product, therefore, all information and recommendations within the body of the DR are considered preliminary unless otherwise noted. The final disposition of surveyed features is represented in the OCS nautical chart update products. All pertinent records for this survey, including the DR, are archived at the National Geophysical Data Center (NGDC) and can be retrieved via <http://www.ngdc.noaa.gov/>.

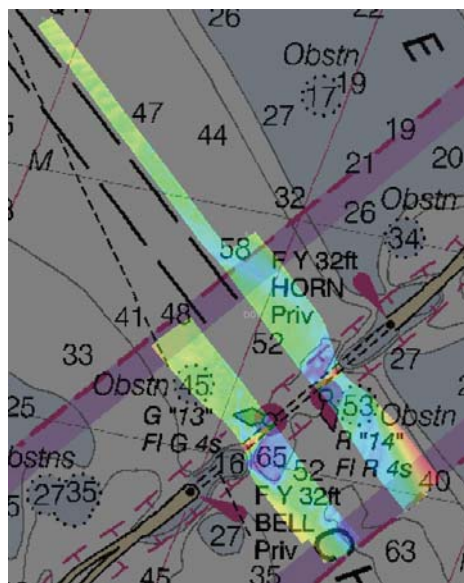
Survey Summary Report to Accompany D00173	
Project	OPR-D304-FH-12
Survey	D00173
State	Virginia
Locality	Approaches to Chesapeake Bay
Sub Locality	Vicinity of Tail of the Horseshoe
Scale of Survey	10000
Sonars Used	Reson 7125
Horizontal Datum	North American Datum of 1983 (NAD83)
Vertical Datum	Mean Lower Low Water (MLLW)
Vertical Datum Correction	VDatum Ellipsoidal derived tides
Projection	Latitude-Longitude (NAD83) - UTM Zone 18N
Field Unit	NOAA Ship <i>Ferdinand R. Hassler</i>
Survey Dates	10/31/2012
Chief of Party	LCDR Benjamin K. Evans, NOAA
Submission Date	4/15/2013

A. Area Surveyed

This hydrographic survey was acquired in accordance with the requirements defined in the email correspondence included in the appendices of this document.

Data was acquired within the following survey limits:

Northeast Limit	Southwest Limit
37.0634 N	37.0326 N
76.0592 W	76.0879 W



B. Survey Purpose

This survey was conducted in response to National Geodetic Survey (NGS) Remote Sensing Division (RSD) requests for hydrographic survey comparison data with a new Lidar bathymetric system.

C. Intended Use of Survey

This survey is for informational purposes only and is not adequate to supersede prior data. It is not intended for chart compilation. The hydrographer recommends that these data be archived without further action.

D. Data Acquisition and Processing

Please reference Data Acquisition and Processing Report OPR-D304-FH-12_DAPR_V2 for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods.

E. Results and Recommendations

The following are the largest scale RNC and ENC, which cover the survey area:

Chart	Scale	Edition	Edition Date	LNM Date	NM Date
12222	10,000	53	October 2011	3/19/2013	3/23/2013
ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US5VA13M	40,000	29		02/27/2013	No

This data is not intended for charting but the majority of the data agrees to within 2 feet of what is depicted on RNC 12222 and ENC US5VA13M.

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
D00173_50cm	MBES	0.5-meter	10.08 - 22.53 m	NOAA_0.5m	Object Detection
D00173_50cm_Final	MBES	0.5-meter	10.08 - 22.53 m	NOAA_0.5m	Object Detection

Two surfaces were submitted within CARIS Fieldsheet, D00173. Significant overlap was acquired for the 50-centimeter surface to meet density requirements, with the exception of the outer edges of the surface. No systematic errors are evident in the surface.

F. Vertical and Horizontal Control

The vertical datum for this project is Mean Lower Low Water. VDatum was the vertical control method used. The separation file 2011_D304_VDatum_Ellip_MLLW_SEP.xyz, provided from OPS was used for GPS Tide calculation.

The horizontal datum for this project is North American Datum of 1983 (NAD83). Applanix SmartBase was the sole method of positioning. The following CORS Stations were used for post-processed positioning:

CORS Stations
DRV6
LOY2
LOYW
LOYZ
LS03
VAGP

For additional information refer to the OPR-D304-FH-12_Horizontal_and_Vertical_Control_Report submitted under separate cover.




G. Additional Results

There were no other results for survey D00173.

H. Approval

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 Survey Summary Report, and all accompanying records and data are approved. All records are forwarded to the Atlantic Hydrographic Branch.

The survey data do not meet all requirements in the NOS Hydrographic Surveys and Specifications Deliverables Manual, Field Procedures Manual, and HSD Technical Directives. These data are not adequate to supersede charted data in their common areas. The hydrographer recommends that this dataset and accompanying documentation be archived without further action. This survey is complete and no additional work is required.

Approver Name	Approver Title	Approval Date	Signature
LCDR Benjamin K. Evans, NOAA	Chief of Party	4/15/2013	
LT Samuel F. Greenaway, NOAA	Field Operations Officer	4/15/2013	
David T. Moehl	Senior Survey Technician	4/15/2013	 Digitally signed by David Moehl Date: 2013.04.15 09:44:01 -04'00'

APPENDIX I
TIDES AND WATER LEVELS

Request for Tides	None
Tide Note	None

APPENDIX II

SUPPLEMENTAL SURVEY RECORDS
AND CORRESPONDENCE

----- Original Message -----

Subject:Re: RSD survey request

Date:Tue, 16 Oct 2012 10:31:15 -0400

From:Corey Allen <corey.allen@noaa.gov>

To:CO.Ferdinand Hassler <co.ferdinand.hassler@noaa.gov>

CC:Marc Moser <marc.s.moser@noaa.gov>, "OPS.Ferdinand Hassler" <ops.ferdinand.hassler@noaa.gov>, Jeffrey Ferguson <jeffrey.ferguson@noaa.gov>, Abigail Higgins <abigail.higgins@noaa.gov>, Castle Parker <castle.e.parker@noaa.gov>, Mike Aslaksen <mike.aslaksen@noaa.gov>

CO,

A D registry number (D00173) has been assigned for the requested survey area around CBBT. Please submit this data to the branch for review and provide a survey outline as per normal, no descriptive report is required.

The attached graphic contains the registry number and ancillary information.

Please also find attached two flavors (VDatum SEP or TCARI) of vertical reduction schemes available for your use.

Please don't hesitate to contact myself or LCDR Moser if you have any additional questions.

Regards, Corey

On Mon, Oct 15, 2012 at 9:08 AM, Marc Moser <marc.s.moser@noaa.gov> wrote:

----- Forwarded message -----

From: LCDR Ben Evans <benjamin.k.evans@noaa.gov>

Date: Sat, Oct 13, 2012 at 6:49 PM

Subject: Re: RSD survey request

To: Marc Moser <marc.s.moser@noaa.gov>

Cc: Jeffrey Ferguson <Jeffrey.Ferguson@noaa.gov>, Mike Aslaksen <mike.aslaksen@noaa.gov>, Abigail Higgins <abigail.higgins@noaa.gov>, LT Sam Greenaway <OPS.Ferdinand.Hassler@noaa.gov>

Marc,

I've attached the outline we have from RSD - it's just an image, but based on the scale we estimate that it would take about 6 hours to do the whole thing (all four boxes), excluding transit time between the bridge-tunnel islands.

Please let us know how you would like us to proceed.

Ben

On 10/12/2012 6:48 AM, Marc Moser wrote:

With reduced DAS for the ships, my first inclination is to squeeze as much accountable productivity as possible for all operations. I am not sure how large of an area we are talking about (just around the rip-rap?, just in the channel?)

If no navigational hazards identified in data, I propose that in the very least the raw data be sent to NGDC as a D survey w/o DR (survey outline to Brian as well).

On Thu, Oct 11, 2012 at 7:21 PM, LCDR Ben Evans <benjamin.k.evans@noaa.gov> wrote:

Jeff, Marc,

Mike A. has requested a quick survey of the Chesapeake Bay Bridge Tunnel complexes on a "not to interfere" basis with our normal ops. The data will be used for comparison with airborne synthetic aperture radar bathymetry acquired by the Navy in August of this year. We do have fairly recent data in that area (most recently, post-Irene in August 2011) which I believe Abigail has provided, but the navy is looking for validation of some fairly fine-scale features which may well have shifted over the course of last winter.

We estimate that acquisition will only take ~6 hours, so unless you object we plan to pick away at this over our next several transits through the bridge tunnel. We are working with Mike to determine what the Navy's product requirements are. Obviously, we'd prefer to do this with a minimum of back-end processing fuss, but do let us know if we absolutely need to treat this as an FE and write it up as such.

Thanks,

Ben

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LCDR Ben Evans, NOAA
Commanding Officer
NOAA Ship FERDINAND R. HASSLER (S-250)
mobile: [\(240\) 687-4602](tel:2406874602)
ship's cell: [\(603\) 812-8748](tel:6038128748)

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LCDR Marc S. Moser, NOAA
Chief, Operations Branch
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Silver Spring, MD 20910
Tel: [\(301\) 713-2702 x112](tel:3017132702), Fax: [\(301\) 713-4533](tel:3017134533), Cel: [\(757\) 339-1950](tel:7573391950)

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APPENDIX III

SURVEY FEATURES REPORT

AWOIS	0
DTONs	0
Maritime Boundary Items	0
Wrecks	0

APPROVAL PAGE

D00173

Data meet or exceed current specifications as certified by the OCS survey acceptance review process. Descriptive Report and survey data except where noted are adequate to supersede prior surveys and nautical charts in the common area.

The following products will be sent to NGDC for archive

- D00173_DR.pdf
- Collection of depth varied resolution BAGS
- Processed survey data and records
- D00173_GeoImage.pdf

The survey evaluation and verification has been conducted according current OCS Specifications, and the survey has been approved for dissemination and usage of updating NOAA's suite of nautical charts.

Approved: _____

LCDR Abigail Higgins, NOAA
Chief, Atlantic Hydrographic Branch