F00802

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service

DESCRIPTIVE REPORT

Type of Survey:	Support USCG
Registry Number:	F00802

LOCALITY

State(s):	Maine
General Locality:	Mistaken Ground
Sub-locality:	Hayley Ann Wreck Investigation

2020

CHIEF OF PARTY
Lieutenant Commander Megan R. Guberski

LIBRARY & ARCHIVES

Date:

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	REGISTRY NUMBER:
HYDROGRAPHIC TITLE SHEET	**F00802**

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(s):	**Maine**
General Locality:	**Mistaken Ground**
Sub-Locality:	**Hayley Ann Wreck Investigation**
Scale:	**40000**
Dates of Survey:	**03/05/2020 to 03/09/2020**
Instructions Dated:	**02/24/2020**
Project Number:	**OPR-A366-FH-19**
Field Unit:	**NOAA Ship Ferdinand Hassler (S250)**
Chief of Party:	**Lieutenant Commander Megan R. Guberski**
Soundings by:	**Kongsberg Maritime EM 2040C (MBES)**
Imagery by:	**N/A**
Verification by:	**Atlantic Hydrographic Branch**
Soundings Acquired in:	**meters at Mean Lower Low Water**

Remarks:

Any revisions to the Descriptive Report (DR) applied during office processing are shown in red italic text. The DR is maintained as a field unit product, therefore all information and recommendations within this report are considered preliminary unless otherwise noted. The final disposition of survey data is represented in the NOAA nautical chart products. All pertinent records for this survey are archived at the National Centers for Environmental Information (NCEI) and can be retrieved via https://www.ncei.noaa.gov/. Products created during office processing were generated in NAD83 UTM 19N, MLLW. All references to other horizontal or vertical datums in this report are applicable to the processed hydrographic data provided by the field unit.

DESCRIPTIVE REPORT MEMO

March 09, 2020

MEMORANDUM FOR: Atlantic Hydrographic Branch

THROUGH: LCDR Megan R. Guberski
Commanding Officer, NOAA Ship *Ferdinand R. Hassler*

GUBERSKI.MEGAN.REBECCA.1283261189
Digitally signed by GUBERSKI.MEGAN.REBECCA.1283261189
Date: 2020.11.30 06:18:17 -05'00'

FROM: Rita Bowker
Sheet Manager, Atlantic Hydrographic Branch

SUBJECT: Submission of Survey F00802

The purpose of this survey is to investigate an area in an effort to locate a recently sunken fishing vessel at the request of the U.S. Coast Guard.

On January 23, 2020 a 43 foot "Duffy" lobstering boat sank in five to eight foot seas offshore of the coast of Maine. Conditions that day included southwest winds and a northeast drift possibly causingthe vessel to drift 0.9 nautical miles northeast before sinking stern first.

NOAA Ship FERDINAND R. HASSLER provided raw (i.e.: .all), processed (i.e.: HDCS), and ancillary (i.e.: POS, SBET, RMS, SVP, FFF) data to the Atlantic Hydrographic Branch. A 16-meter resolution surface was also submitted to the Atlantic Hydrographic Branch.

All soundings were reduced to Mean Lower Low Water using VDatum. The horizontal datum for this project is North American Datum of 1983 (NAD 83). The projection used for this project is Universal Transverse Mercator (UTM) Zone 19.

Data were reduced to MLLW via a grid generated in VDatum with filename: OPR-A366-FH-20_NAD83_VDatum_MLLW.

All survey systems and methods utilized during this survey were as described in 2020_FH_DAPR.

All data were reviewed for DTONs and none were identified in this survey.

This hydrographic survey was conducted in accordance with the requirements defined in the Project Instructions OPR-A366-FH-19 Mistaken Ground Project Instructions_Change_1. Data were acquired on March 5 through March 8, 2020 and covered a total of 75.324 linear nautical miles. Refer to Figure 1 for coverage area. Caris HIPS SIPS 11.2 is the processing software.

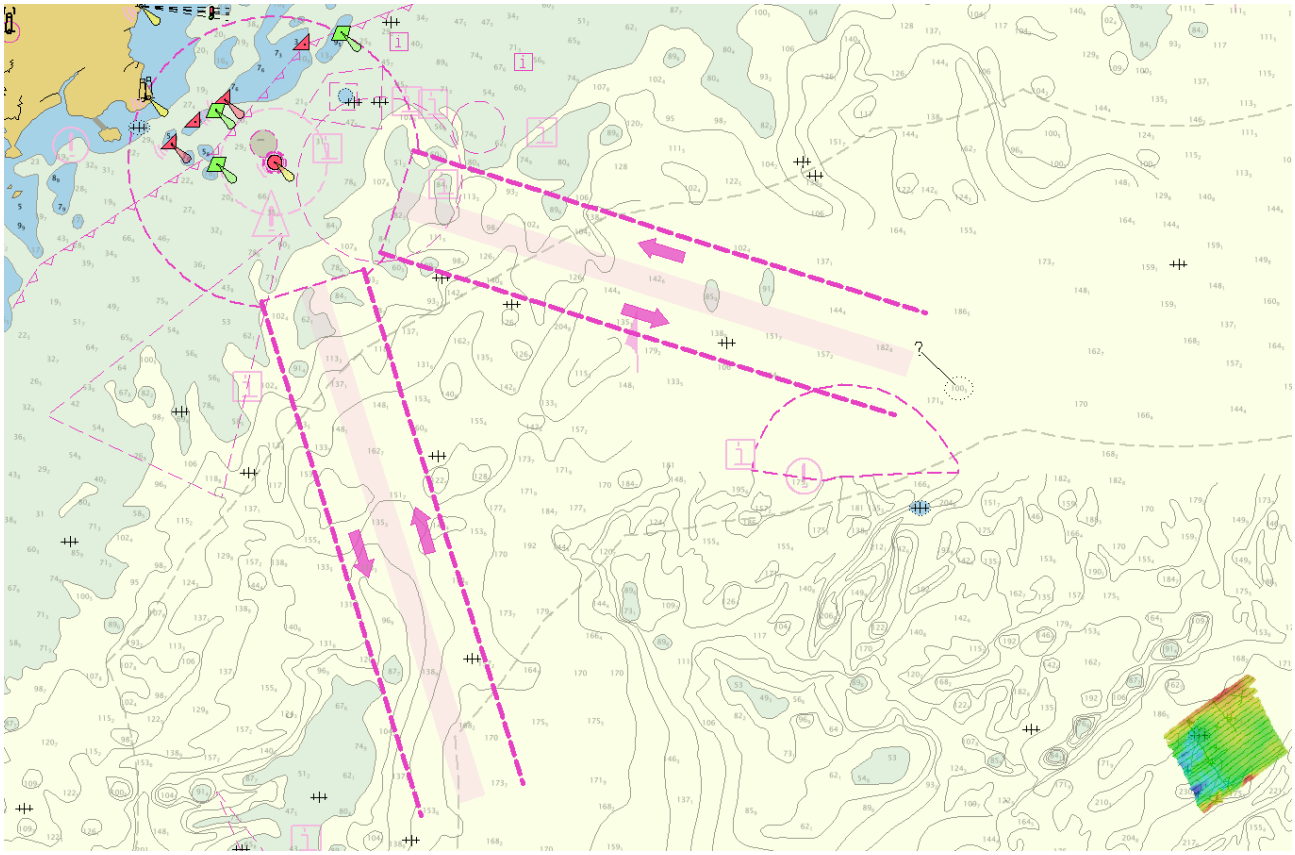
Please refer to the Data Acquisition and Processing Report (DAPR) submitted for the 2020 field season for a complete description of data acquisition and processing systems, survey vessels, quality control procedures, and data processing methods.

Data density values were found to meet the standards specified in NOAA HSSD 2019 with 5 soundings per node, where 99.5% of nodes pass these specifications. Refer to Figure 2.

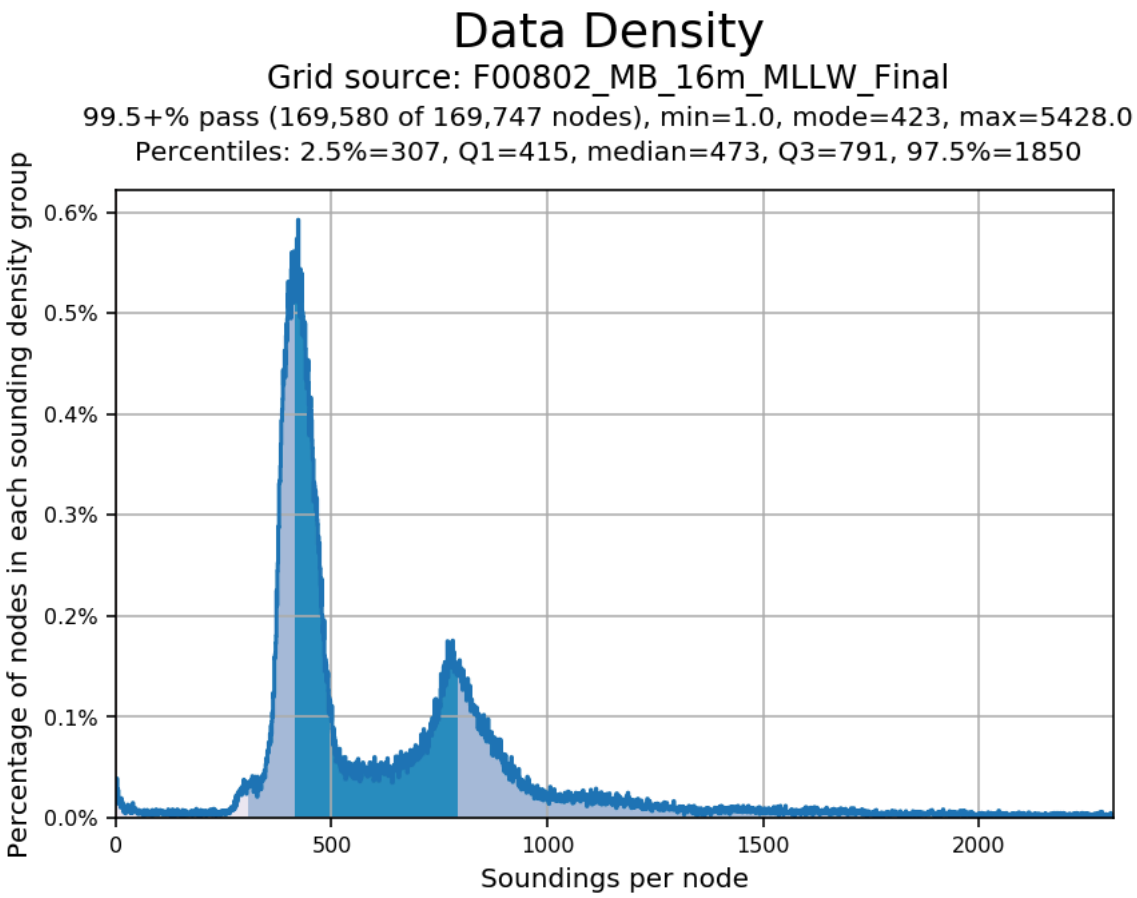
Total vertical uncertainty (TVU) values were found to meet the uncertainty standards specified in the NOAA HSSD, with over 100% of nodes passing these specifications. This evaluation of uncertainty standards was generated using the Grid QA tool included in Pydro 19.4 QC Tools. This tool runs an automated process to check data against the uncertainty standards specified by the NOAA HSSD and the IHO. The computed statistics are shown in Figure 3.

Crosslines totaled 4.778 nm or 6.3% of the total miles run for the survey.

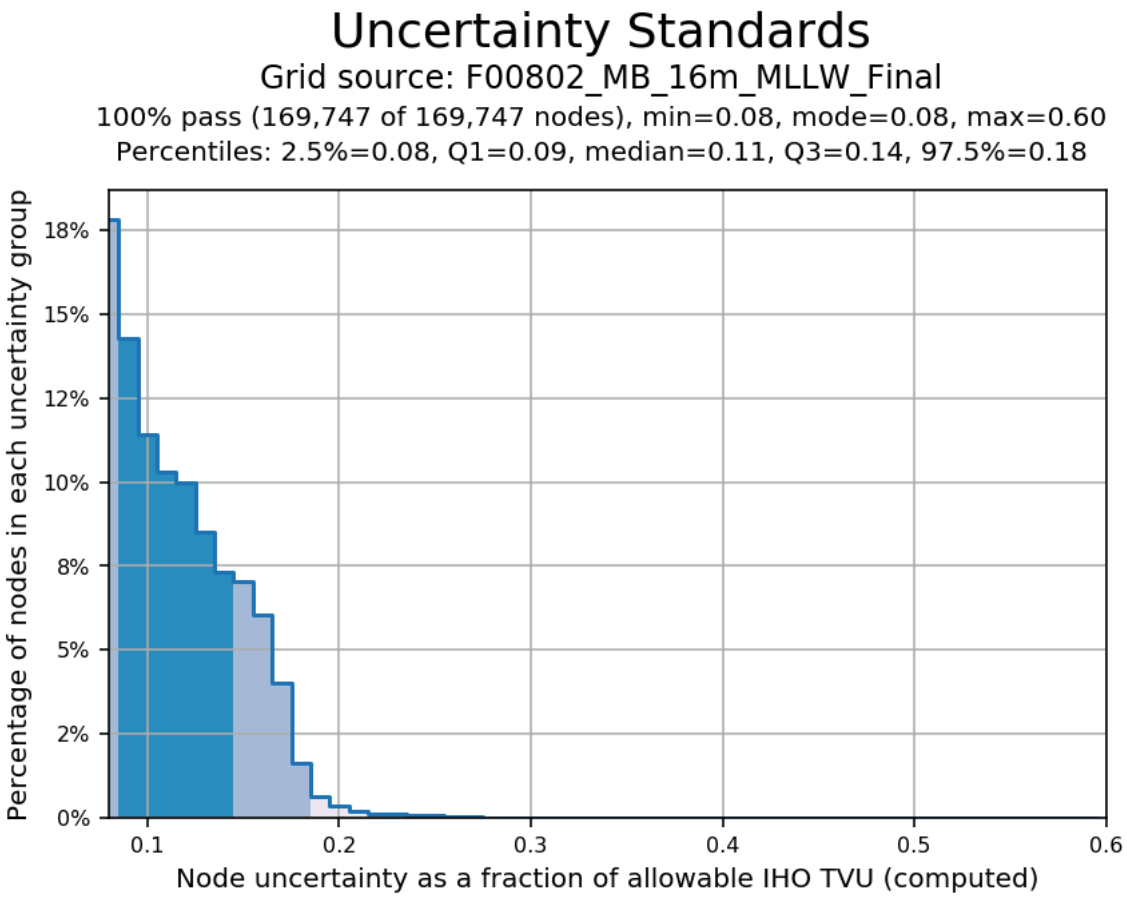
The sunken vessel was found by NOAA Ship FERDINAND R. HASSLER using a Kongsberg EM2040 multibeam in approximately 200 m of water. The ship used a star pattern development plan over the feature to provide more data in order to gain an accurate water column and bathymetric picture (Figures 4 to 6). For more information, refer to the Final Feature File (FFF).



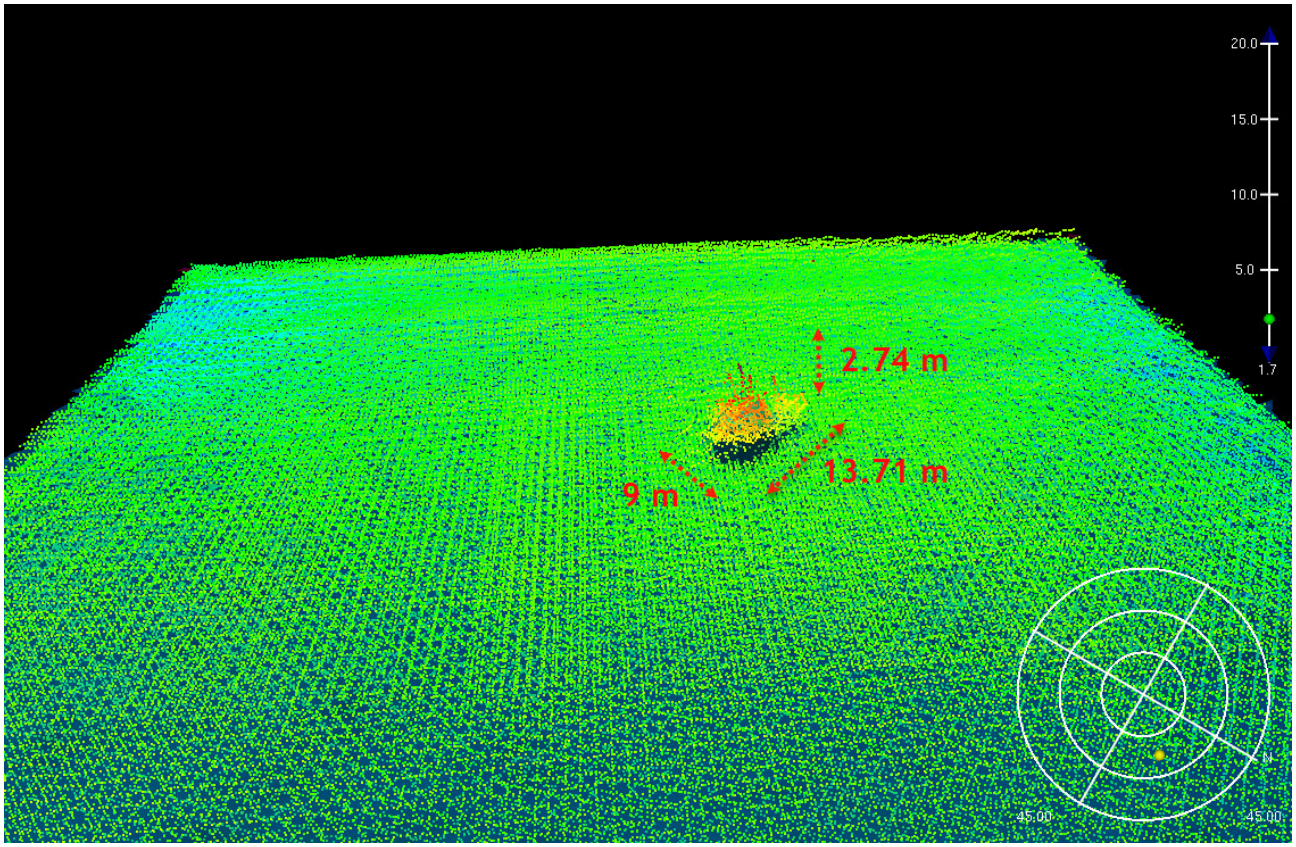
F00802 Overview of the survey area.



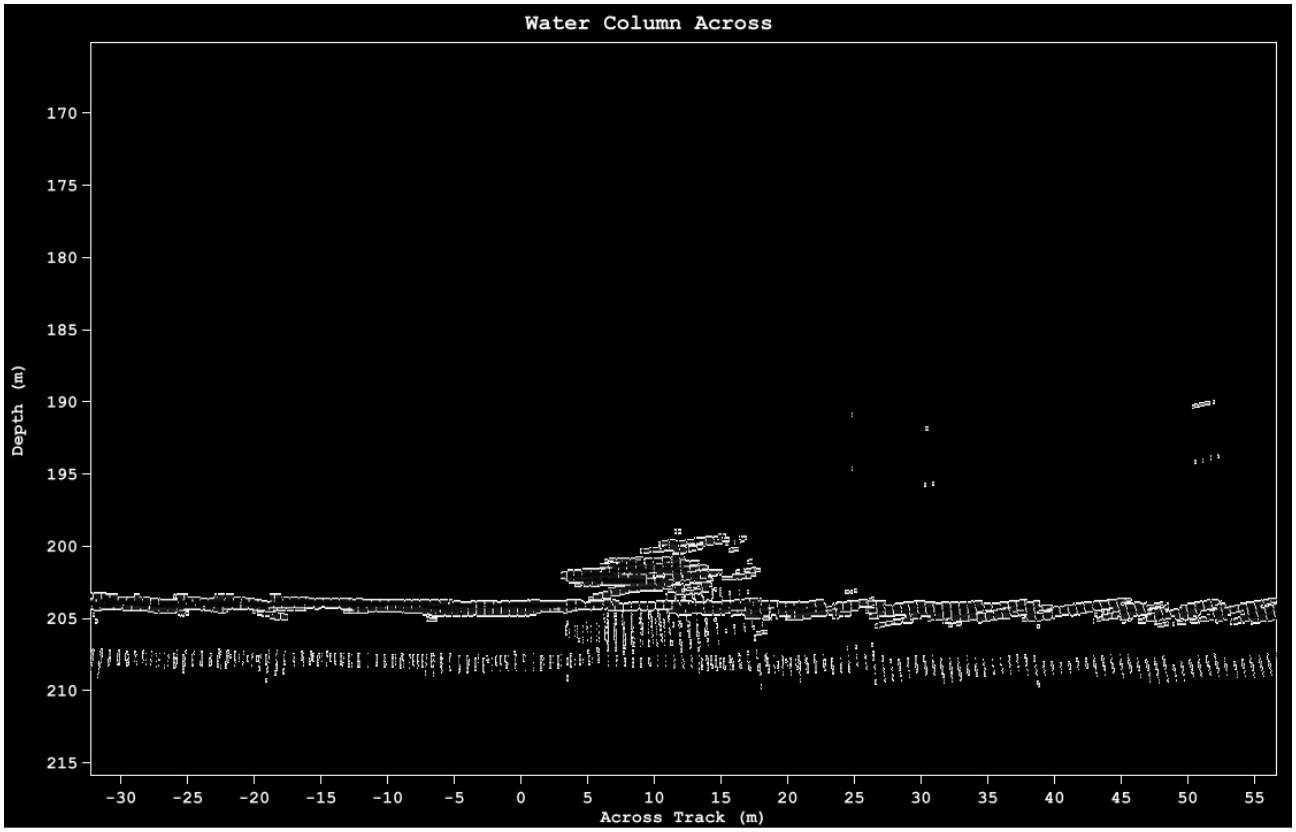
Plot of the Grid QA assessment of Density values against NOAA HSSD specifications.



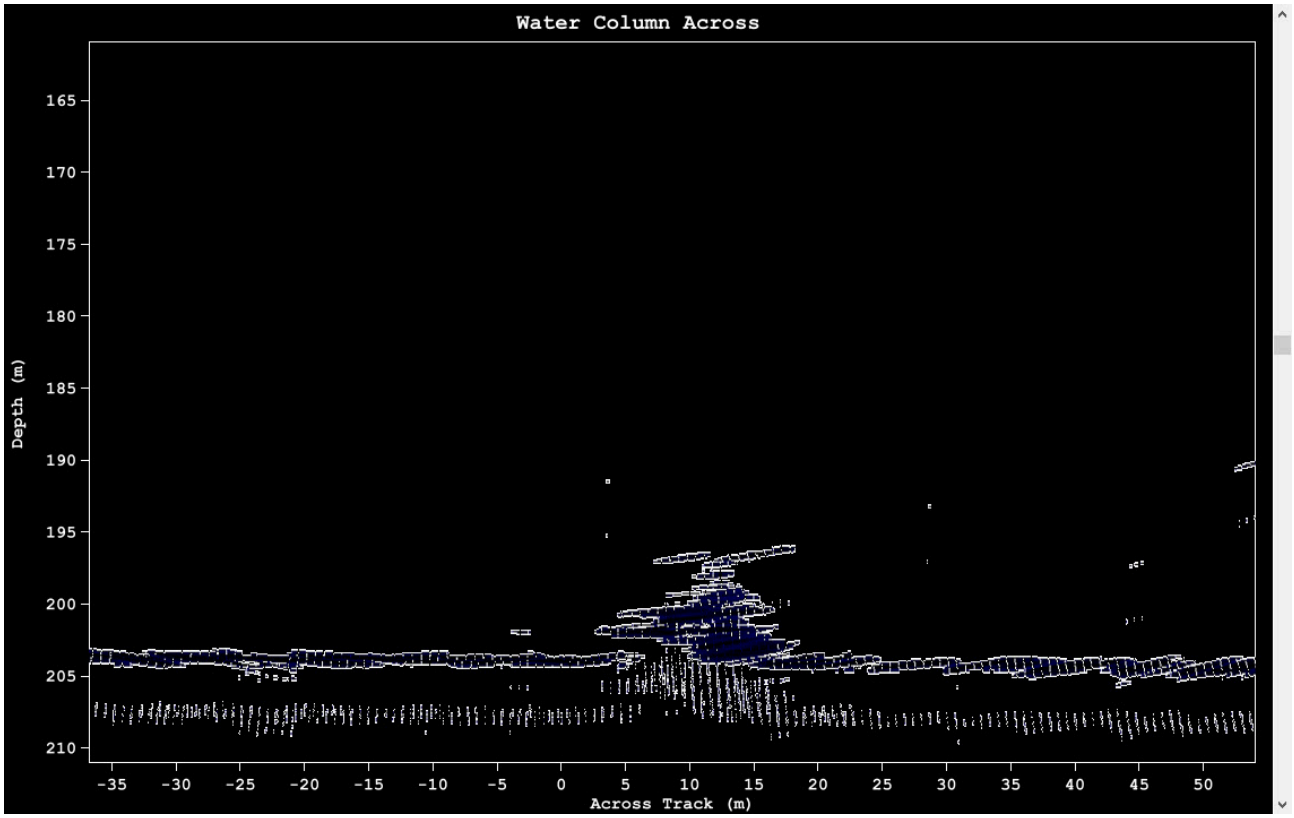
Plot of the Grid QA assessment of TVU values against IHO and NOAA HSSD specifications.



F00802 Sunken vessel found via a Kongsberg EM2040 multibeam echosounder.



F00802 Sunken vessel water column with alongside (beam) view. Where scale (in meters) is Depth (y-axis) versus Across Track Distance (x-axis).



F00802 Sunken vessel water column with width view (either bow or stern).
Where scale (in meters) is Depth (y-axis) versus Across Track Distance (x-axis).

This survey does meet charting specifications and is adequate to supersede prior data.