H13798

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

# DESCRIPTIVE REPORT

| | |
|---|---|
| Type of Survey: | Navigable Area |
| Registry Number: | H13798 |

## LOCALITY

| | |
|---|---|
| State(s): | Alaska |
| General Locality: | Pribilof Islands, AK |
| Sub-locality: | Zapadni Bay |

**2023**

CHIEF OF PARTY
CDR Meghan McGovern

LIBRARY & ARCHIVES

Date:

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

REGISTRY NUMBER:

# HYDROGRAPHIC TITLE SHEET

# H13798

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): | **Alaska** |
| General Locality: | **Pribilof Islands, AK** |
| Sub-Locality: | **Zapadni Bay** |
| Scale: | **20000** |
| Dates of Survey: | **07/22/2023 to 08/13/2023** |
| Instructions Dated: | **05/22/2022** |
| Project Number: | **OPR-R344-FA-23** |
| Field Unit: | **NOAA Ship *Fairweather*** |
| Chief of Party: | **CDR Meghan McGovern** |
| Soundings by: | **Multibeam Echo Sounder** |
| Imagery by: | **Multibeam Echo Sounder Backscatter** |
| Verification by: | **Pacific 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 2N, MLLW. All references to other horizontal or vertical datums in this report are applicable to the processed hydrographic data provided by the field unit.***

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# Descriptive Report to Accompany Survey H13798

Project: OPR-R344-FA-23

Locality: Pribilof Islands, AK

Sublocality: Zapadni Bay

Scale: 1:20000

July 2023 - August 2023

**NOAA Ship *Fairweather***

Chief of Party: CDR Meghan McGovern

# A. Area Surveyed

The survey area is located in Zapadni Bay, AK

## A.1 Survey Limits

Data were acquired within the following survey limits:

| Northwest Limit | Southeast Limit |
|---|---|
| 56° 38' 3.26" N<br>169° 52' 52.84" W | 56° 27' 48.44" N<br>169° 33' 0.92" W |

*Table 1: Survey Limits*

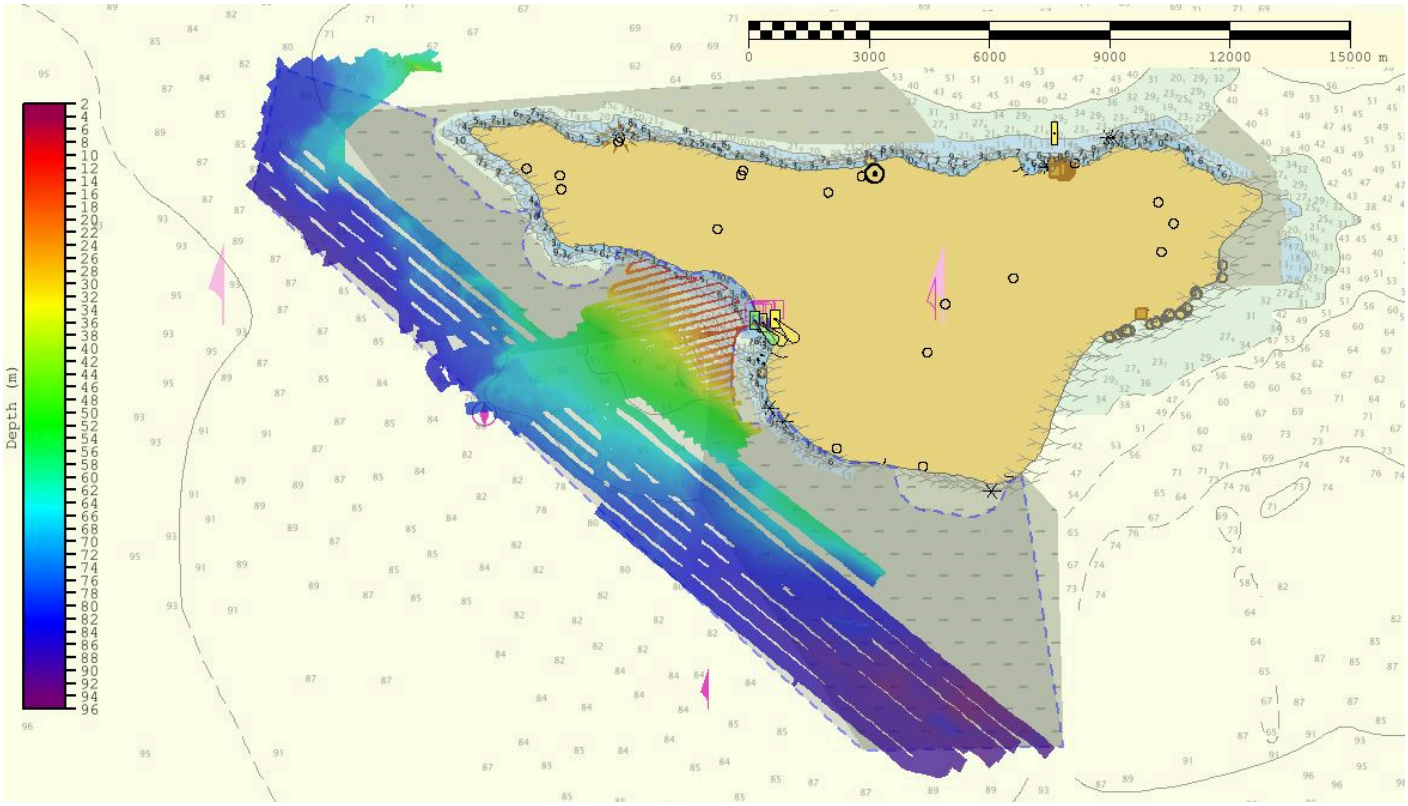



*Figure 1: H13798 sheet limits (in blue) overlaid onto Charts US4AK3QC and US4AK3QD*

Data was not acquired to the survey limits due to weather. Coverage throughout the project was opportunistic based on weather conditions. All data collected was in accordance with the requirements in the Project Instructions and the 2022 NOS Hydrographic Surveys Specifications and Deliverables (HSSD). Coverage acquired in H13798 is shown in Figure 1 with reference to surveyed areas in the sheet limits. Coverage extends past the assigned sheet limits of H13798 in the northwest corner. This is a portion of a neighboring assigned sheet H13799. More data was not able to be acquired in H13799, so the portion collected was included in H13798. In all areas where the 3.5 meter depth contour or the sheet limits were not met, the Navigable Area Limit Line (NALL) was defined as the inshore limit of bathymetry at the 5 meter contour due to the risks of maneuvering the survey vessel in close proximity to the uncharted areas. An example of such an area is shown in the figure below.

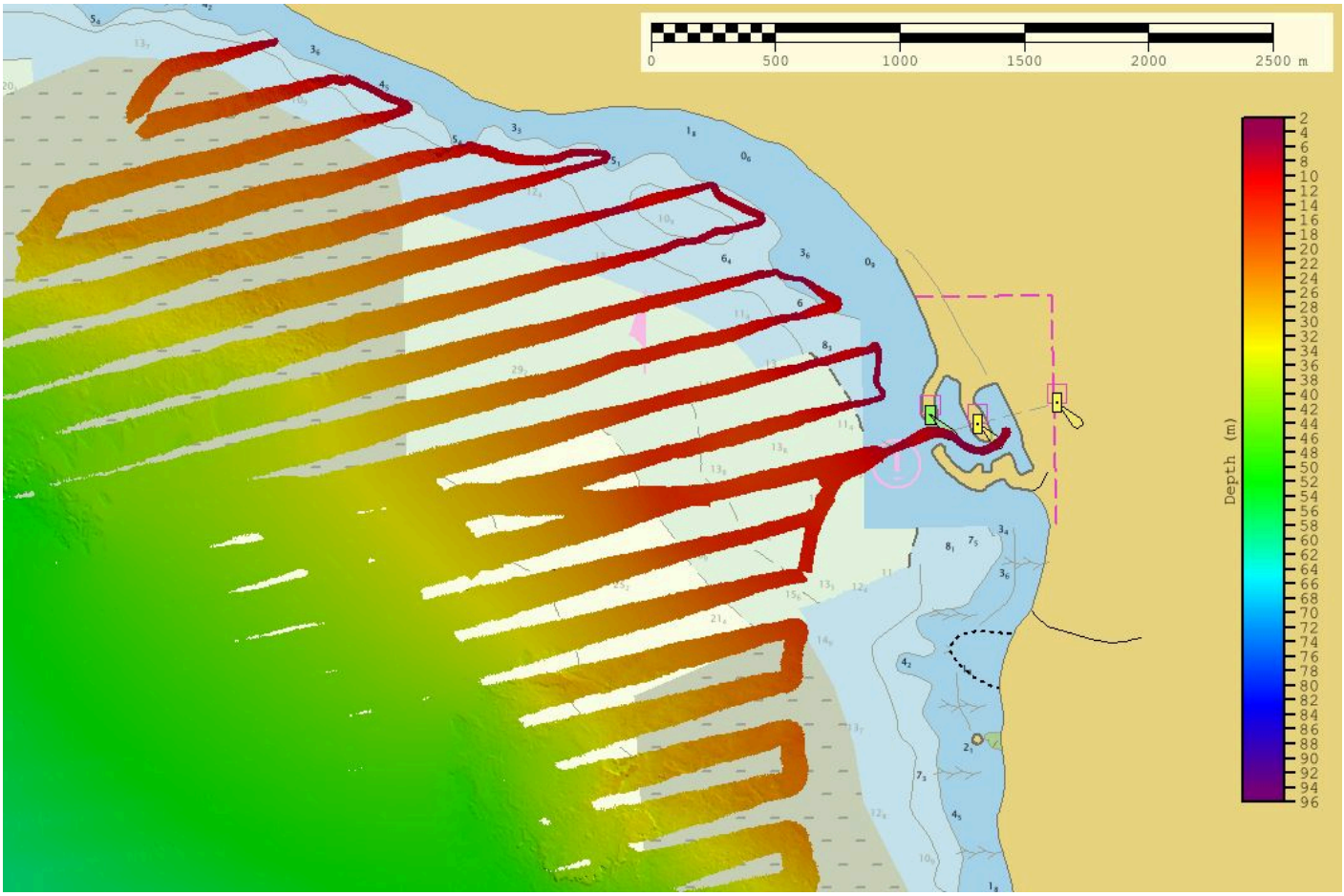



*Figure 2: Area where the NALL was redefined at 5m in uncharted areas due to vessel safety.*

## A.2 Survey Purpose

The Pribilof Islands, a group of four volcanic islands in the Bering Sea, are located 400-km north of the Aleutian Chain. They provide habitat to large colonies of seabirds and marine mammals. The principal islands are Saint Paul and Saint George; they host resident Aleut communities and receive the bulk of shipped supplies and freight. The primary commerce of the Pribilof Islands began in the 1800s with fur seal harvesting, but was halted in the 1980s and has since transitioned to a fishery-based economy. 1 Today's halibut and crab industries employ residents, and provide economic and social benefits for constituents of western Alaska. The income generated from local vessel landing ranged between approximately $1 million to $5.5 million between 2003 and 2015. 2 During crab season, the St. Paul harbor serves over 230 transient vessels. 3 The southwestern shore of St. George is frequently used by commercial fishing vessels for shelter in the Bering Sea during storms. Additionally, cruise ships transport birders that make up 70% of the tourism industry on Pribilof Islands; other attractions include wildlife sightings (e.g., fur seals, Steller sea lions, walruses, whales). 2 Accurate navigational charts are integral to safe transit and continual delivery of goods and services for the Pribilof Islands. Additionally, the islands are one of the few areas to provide a potential lee for vessels transiting in the Bering Sea in inclement weather. The majority of the area was

last surveyed in the 1950s; this project will provide modern bathymetric data for updating NOS charting products, improving maritime safety, as well as support the Seabed 2030 global mapping initiative.

## A.3 Survey Quality

The entire survey is adequate to supersede previous data.

Data acquired in H13798 meets multibeam echo sounder (MBES) coverage requirements for set line spacing, as required by the HSSD. This includes crosslines (see Section B.2.1), NOAA allowable uncertainty (see Section B.2.10), and density requirements (see Section B.2.11).

## A.4 Survey Coverage

The following table lists the coverage requirements for this survey as assigned in the project instructions:

| Water Depth | Coverage Required |
|---|---|
| All waters in survey area. | Set Line Spacing MBES at 200m/400m |

*Table 2: Survey Coverage*

For offshore areas greater than 50m depth, 400m set line spacing was used in consultation with the Project Manager.

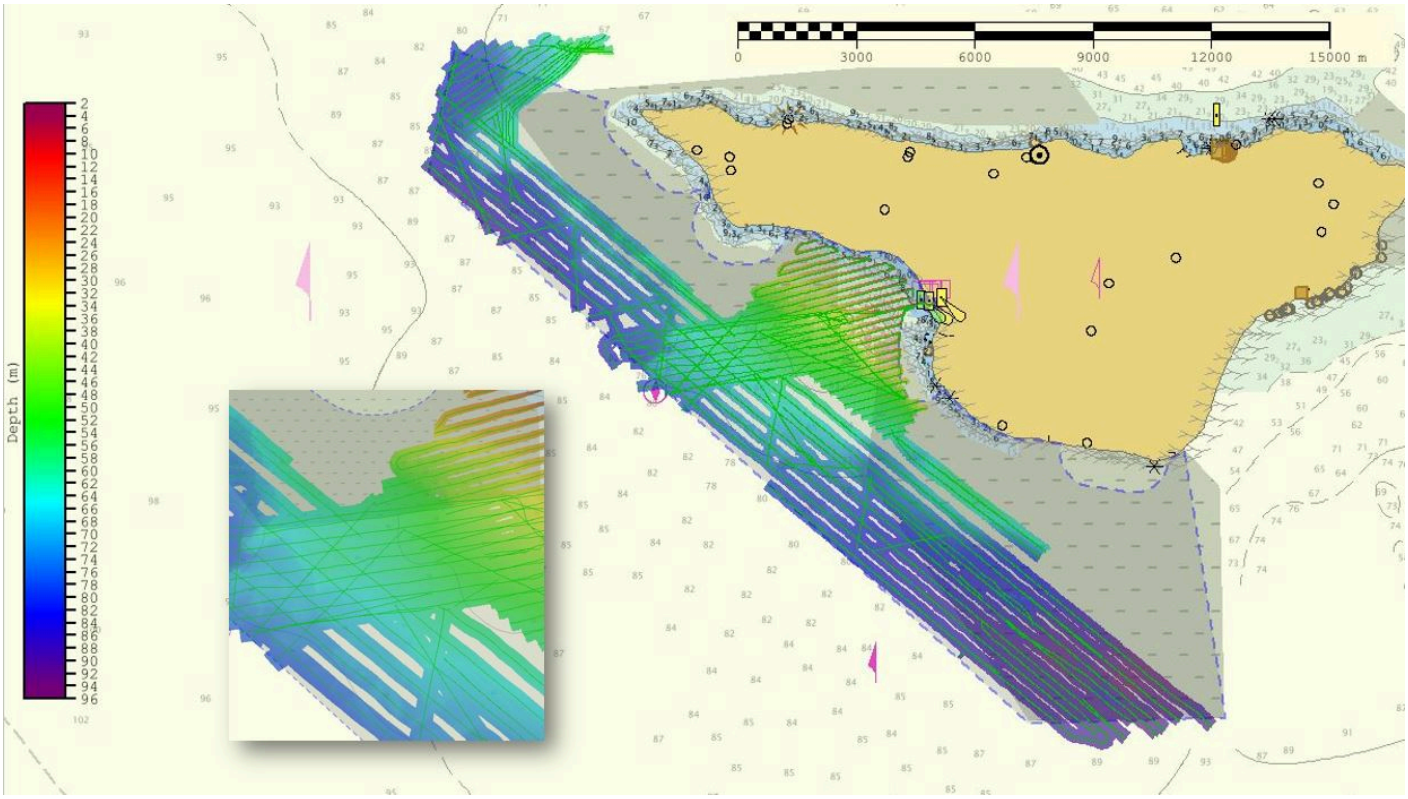



*Figure 3: H13798 comparison of 200m and 400m set line spacing coverage. At about 50m depth 200m set line spacing becomes complete coverage.*

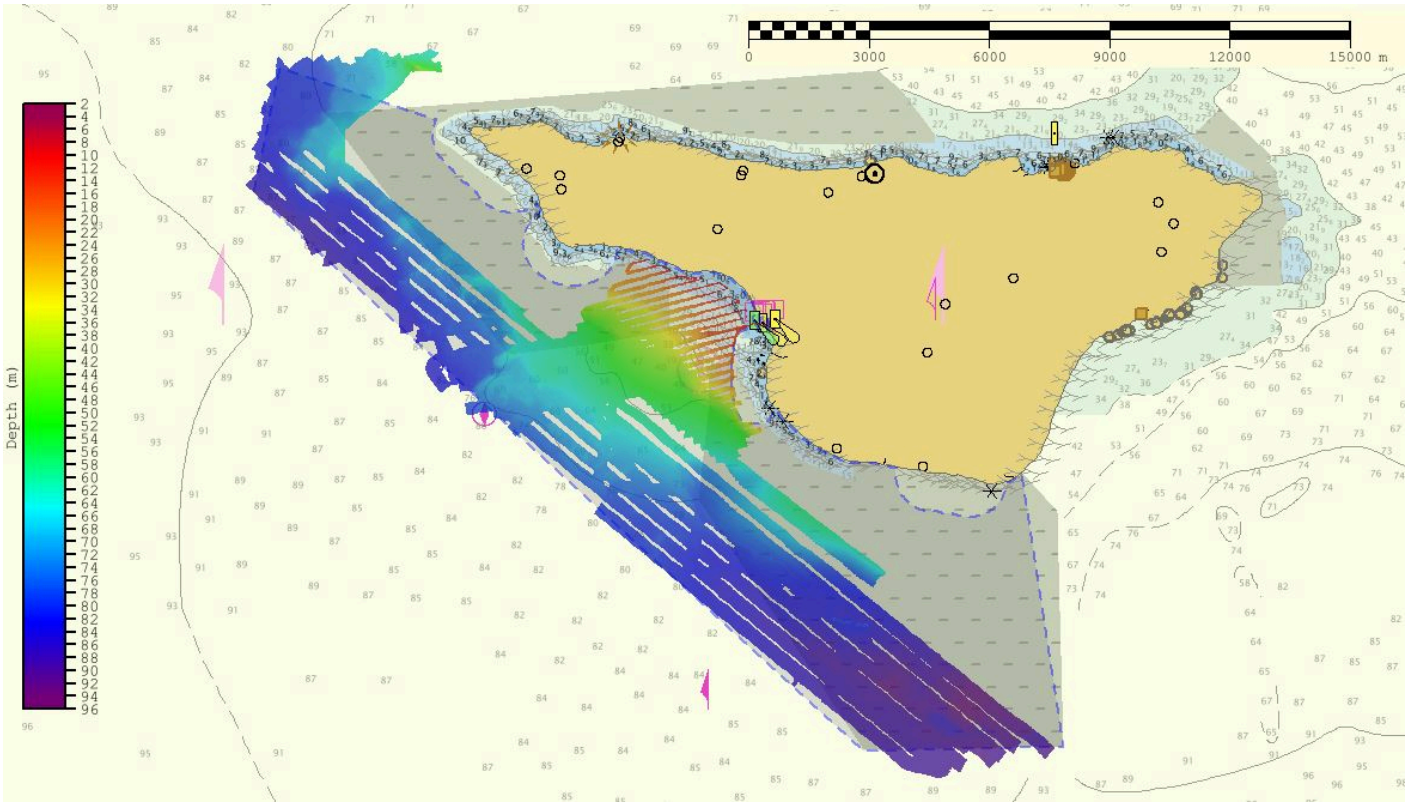



*Figure 4: H13798 survey coverage overlaid onto charts US4AK3QC and US4AK3QD*

## A.6 Survey Statistics

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

| | HULL ID | *2805* | *2806* | *2807* | *S220* | *Total* |
|---|---|---|---|---|---|---|
| **LNM** | **SBES Mainscheme** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | **MBES Mainscheme** | 2.58 | 20.67 | 20.21 | 152.05 | 195.51 |
| | **Lidar Mainscheme** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | **SSS Mainscheme** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | **SBES/SSS Mainscheme** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | **MBES/SSS Mainscheme** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | **SBES/MBES Crosslines** | 8.7 | 0.0 | 0.0 | 12.95 | 19.86 |
| | **Lidar Crosslines** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Number of Bottom Samples** | | | | | | 0 |
| **Number Maritime Boundary Points Investigated** | | | | | | 0 |
| **Number of DPs** | | | | | | 0 |
| **Number of Items Investigated by Dive Ops** | | | | | | 0 |
| **Total SNM** | | | | | | 21.38 |

*Table 3: Hydrographic Survey Statistics*

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

| Survey Dates | Day of the Year |
|---|---|
| 07/22/2023 | 203 |
| 08/03/2023 | 215 |

| Survey Dates | Day of the Year |
|---|---|
| 08/09/2023 | 221 |
| 08/10/2023 | 222 |
| 08/11/2023 | 223 |
| 08/13/2023 | 225 |

*Table 4: Dates of Hydrography*

# B. Data Acquisition and Processing

## B.1 Equipment and Vessels

Refer to the OPR-R344-FA-23 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** | ***S220*** | ***2805*** | ***2806*** | ***2807*** |
|---|---|---|---|---|
| **LOA** | 70.4 meters | 8.6 meters | 8.6 meters | 8.6 meters |
| **Draft** | 4.8 meters | 1.1 meters | 1.1 meters | 1.1 meters |

*Table 5: Vessels Used*

*Figure 5: Image of HSLs used during survey (2805, 2806, and 2807)*


*Figure 6: Image of S220 NOAA Ship Fairweather used during survey*

### B.1.2 Equipment

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

| Manufacturer | Model | Type |
|---|---|---|
| Kongsberg Maritime | EM 2040 | MBES |
| Kongsberg Maritime | EM 712 | MBES |
| Sea-Bird Scientific | SBE 19plus V2 | Conductivity, Temperature, and Depth Sensor |
| AML Oceanographic | MVP200 | Conductivity, Temperature, and Depth Sensor |
| Teledyne RESON | SVP 70 | Sound Speed System |
| Teledyne RESON | SVP 71 | Sound Speed System |
| Applanix | POS MV 320 v5 | Positioning and Attitude System |

*Table 6: Major Systems Used*

The equipment was installed on the survey platform as follows: S220 utilizes the Kongsberg EM 712MBES, a POS M/V v5 system for position and attitude, SVP 70 surface sound speed sensors, and AML Oceanographic MVP 200 for conductivity, temperature, and depth (CTD) casts. All launches utilize the Kongsberg EM 2040 MBES, a POS M/V v5 system for position and attitude, SVP 71 surface sound speed sensors, and Sea-Bird SBE 19plus v2 CTDs for conductivity, temperature, and depth casts.

## B.2 Quality Control

### B.2.1 Crosslines

Crosslines were collected, processed and compared in accordance with Section 5.2.4.2 of the HSSD. For adequate comparison, 10.16% of crossline to MBES data was acquired. To evaluate crosslines, a surface generated via data strictly from mainscheme lines and a surface generated via data strictly from crosslines were created. From these two surfaces, a difference surface (mainscheme - crosslines = difference surface) was generated. Statistics show the mean difference between the depths derived from mainscheme data and crossline data was 0.04 meters and 90% of nodes falling within +/-0.39 meters. For the respective depths, the difference surface was compared to the allowable NOAA uncertainty standards. In total, 100% of the depth differences between H13798 mainscheme and crossline data were within allowable NOAA uncertainties

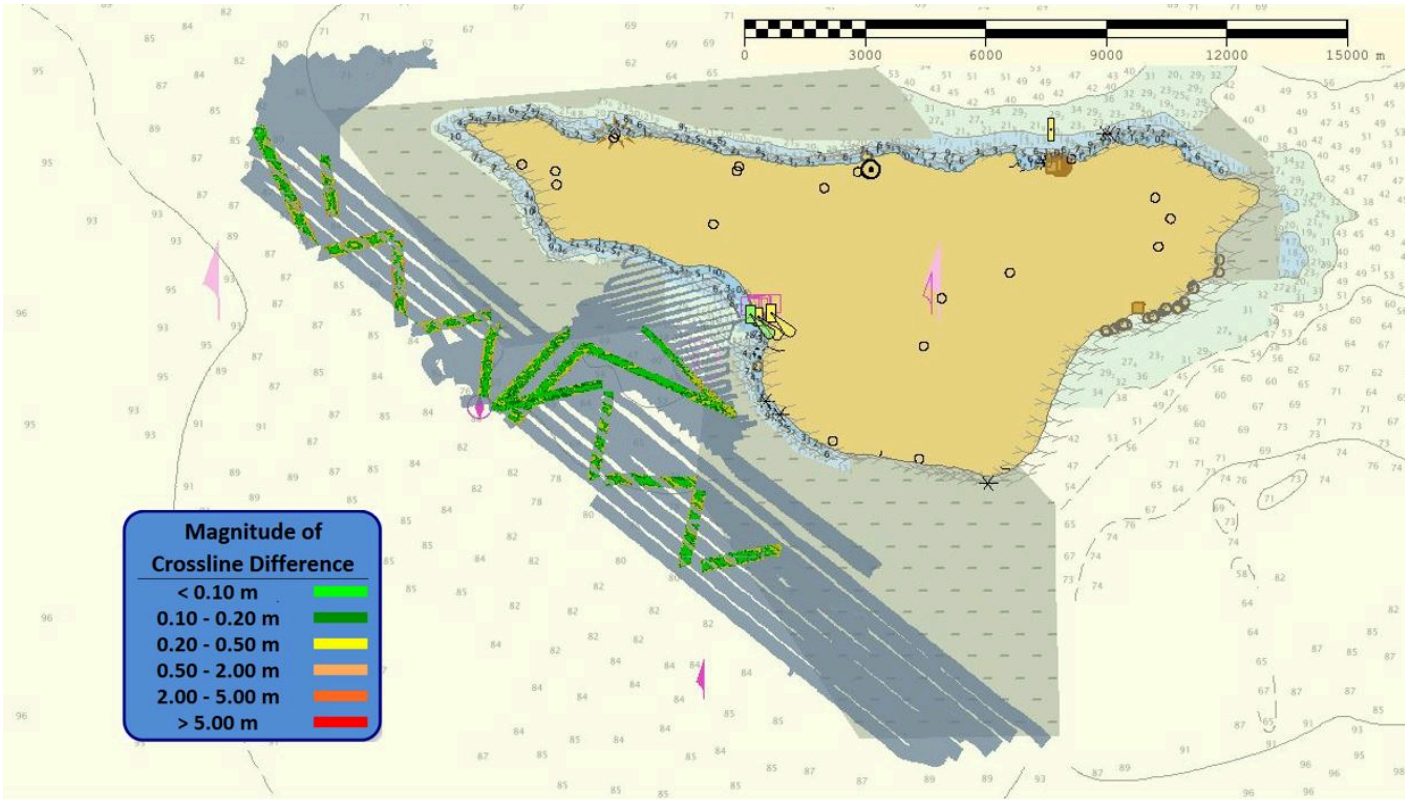
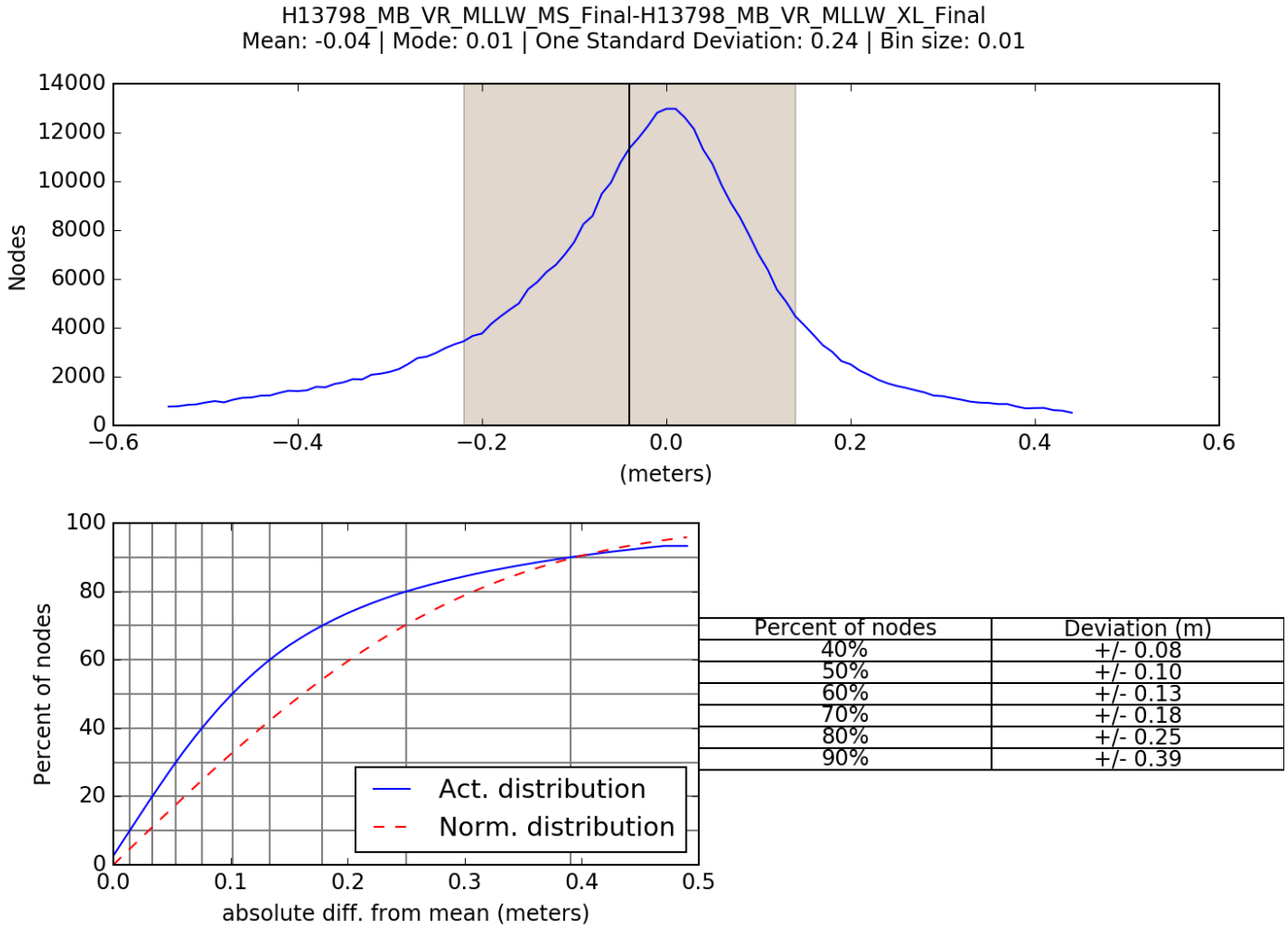



*Figure 7: Overview of H13798 crosslines*




| Percent of nodes | Deviation (m) |
|---|---|
| 40% | +/- 0.08 |
| 50% | +/- 0.10 |
| 60% | +/- 0.13 |
| 70% | +/- 0.18 |
| 80% | +/- 0.25 |
| 90% | +/- 0.39 |

*Figure 8: Difference surface statistics between H13798 MS and H13798 XL (VR surface)*

### B.2.2 Uncertainty

The following survey specific parameters were used for this survey:

| Method | Measured | Zoning |
|---|---|---|
| ERS via ERTDM | 0.0 meters | 0.1 meters |

*Table 7: Survey Specific Tide TPU Values.*

| Hull ID | Measured - CTD | Measured - MVP | Measured - XBT | Surface |
|---|---|---|---|---|
| 2805 | 2 meters/second | N/A meters/second | N/A meters/second | 0.5 meters/second |
| 2806 | 2 meters/second | N/A meters/second | N/A meters/second | 0.5 meters/second |
| 2807 | 2 meters/second | N/A meters/second | N/A meters/second | 0.5 meters/second |
| S220 | N/A meters/second | 1.0 meters/second | N/A meters/second | 0.5 meters/second |

*Table 8: Survey Specific Sound Speed TPU Values*.

In addition to the a priori estimates of uncertainty provided via device models for vessel motion, VDatum and real-time and post-processed uncertainty sources were also incorporated into the depth estimates of survey H13798. Real-time uncertainties were provided via EM2040 and EM712 MBES data and Applanix Delayed Heave RMS. Following post-processing of the real-time vessel motion, recomputed uncertainties of vessel gps height and navigation were applied in CARIS HIPS and SIPS via a Smoothed Best Estimate of Trajectory (SBET) RMS file generated in Applanix POSPac.

### B.2.3 Junctions

There are no contemporary surveys that junction with this survey.

### B.2.4 Sonar QC Checks

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

### B.2.5 Equipment Effectiveness

There were no conditions or deficiencies that affected equipment operational effectiveness.

### B.2.6 Factors Affecting Soundings

Sound Speed Issues

Heavy weather and currents that wrapped around the island created sound speed issues identified by "smiles" and "frowns" prevalent throughout the survey and were cleaned out in subset editor. Surfaces were not significantly impacted, and the data still meets the NOAA allowable uncertainty parameters from HSSD Section 5.1.3, and as such, the data remains sufficient to supersede previous data.

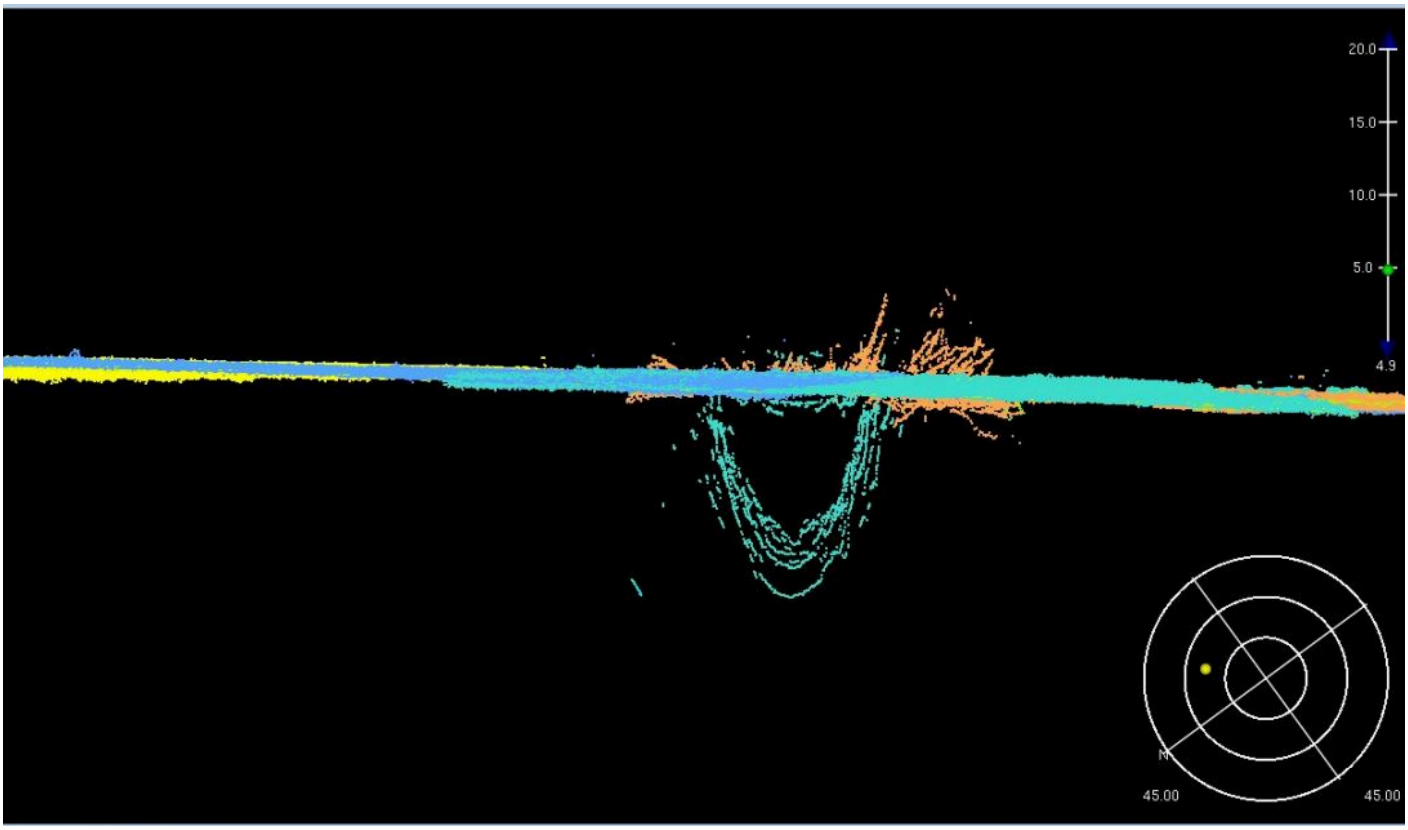



*Figure 9: Sound speed issues seen in H13798*

### B.2.7 Sound Speed Methods

Sound Speed Cast Frequency: Minimum of one every four hours

Casts were conducted at a minimum of one every four hours during launch acquisition. Casts were conducted more frequently in areas where the influx of freshwater had an effect on the speed of sound in the water column and when there was a change in surface sound speed greater than two meters per second. MVP casts

on S220 were conducted at an average interval of 120 minutes, guided by observation of the surface sound speed and targeted to deeper areas. All sound speed methods were used as detailed in the DAPR.

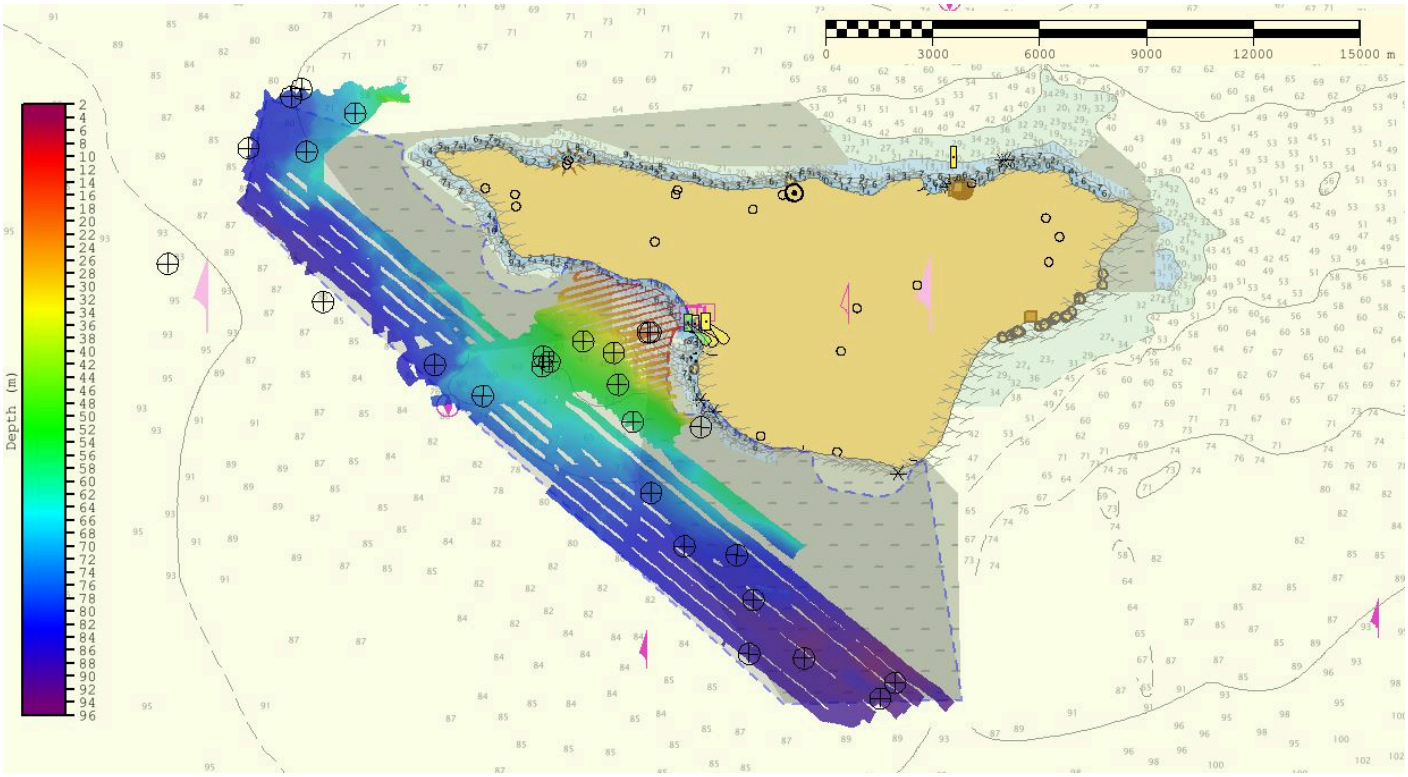



*Figure 10: Cast locations for H13798*

### B.2.8 Coverage Equipment and Methods

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

### B.2.9 Holidays

H13798 data were reviewed in CARIS HIPS and SIPS for holidays in accordance with Section 5.2.2.3 of the HSSD. There were 18 areas flagged as holidays by holiday finder which meet the definition described in the HSSD for complete coverage were identified via HydrOffice QC Tools Holiday Finder tool. This tool automatically scans the surface for holidays as defined in the HSSD and was run in conjunction with a visual inspection of the surface by the hydrographer. All areas flagged as holidays were intersections of crosslines or in between the swaths of set line spacing requirements, therefore, these 18 instances are not deemed to be holidays.

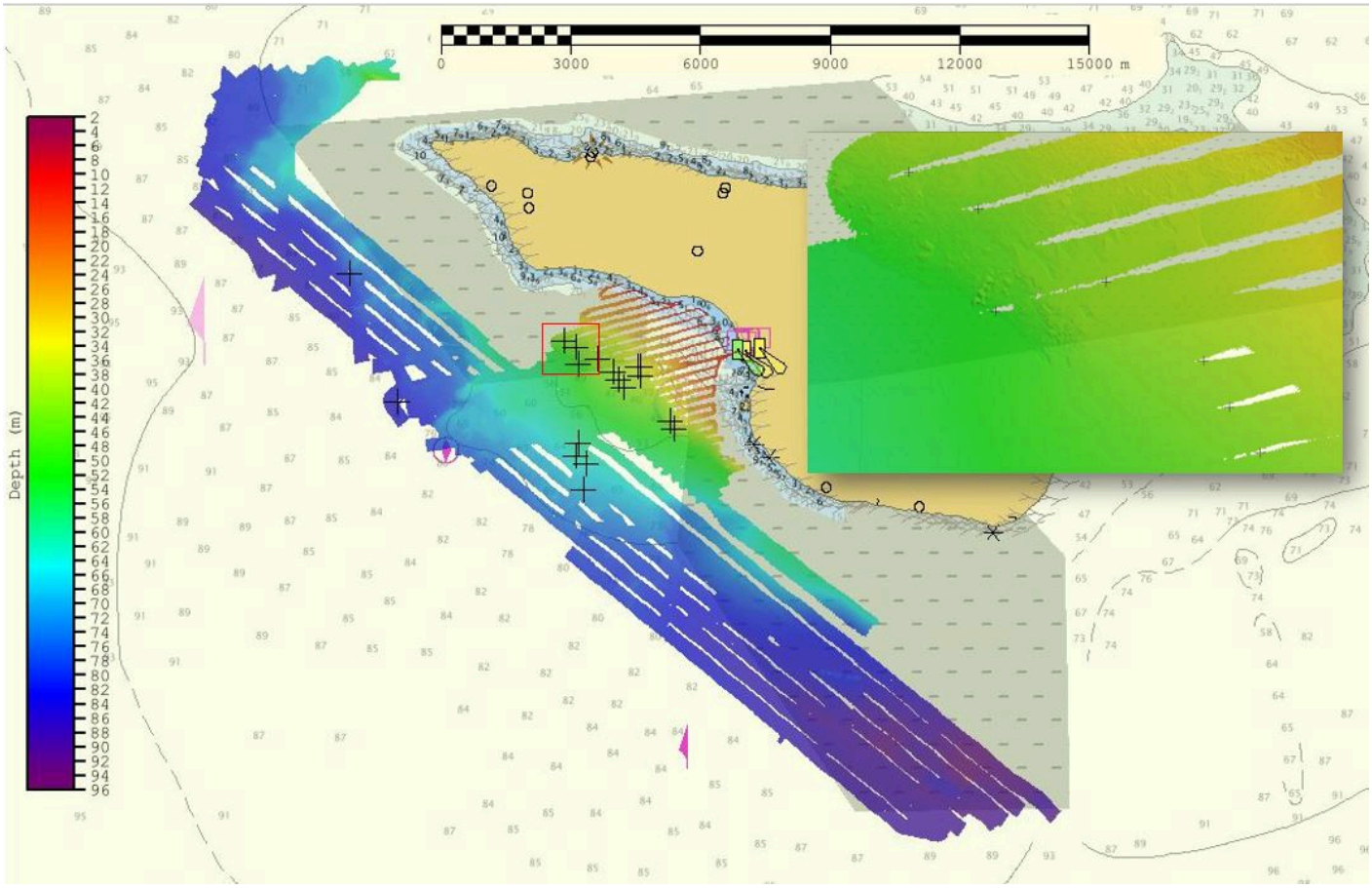



*Figure 11: H13798 Areas where crosslines or set lines intersect detected by QC Tools Holiday Finder tool.*

### B.2.10 NOAA Allowable Uncertainty

The surface was analyzed using the HydrOffice QC Tools Grid QA feature to determine compliance with specifications. Overall, 99.5+% of nodes within the surface meet NOAA Allowable Uncertainty specifications for H13798 (see figure below).

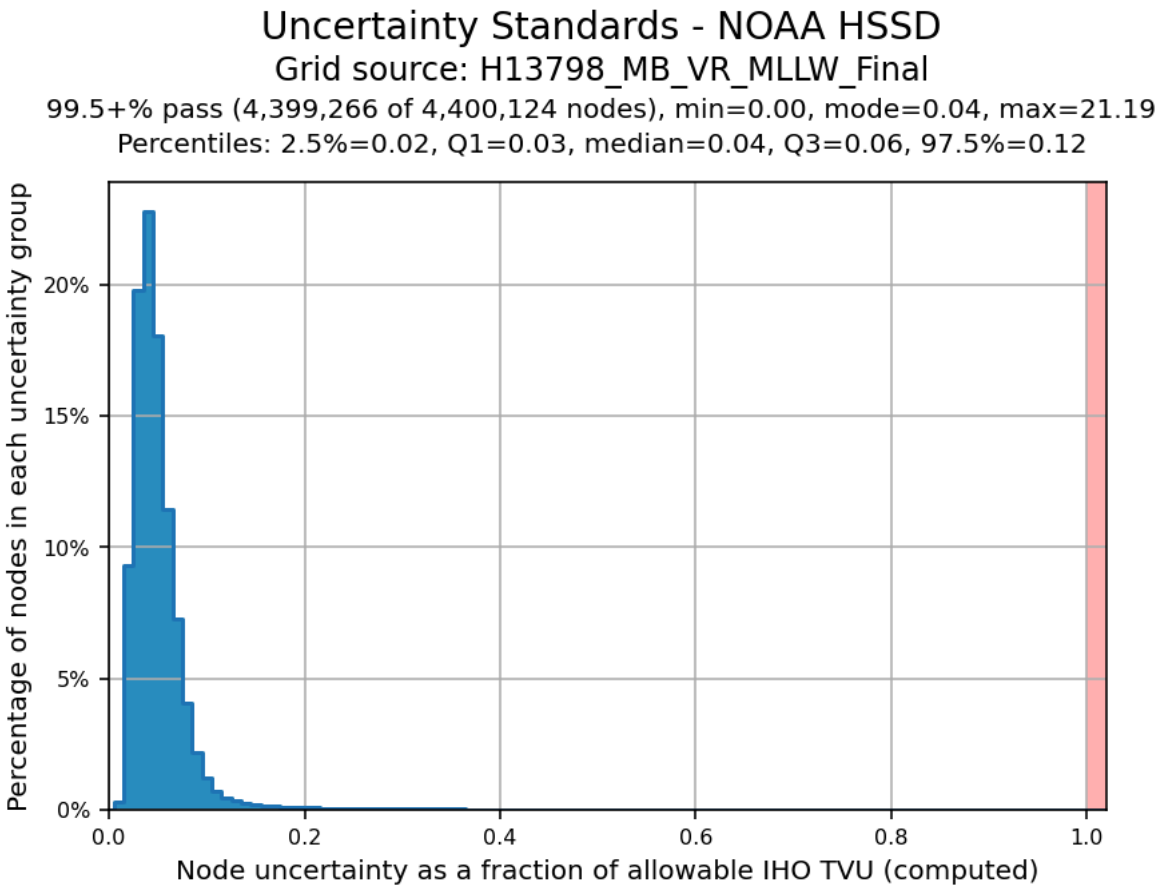



*Figure 12: H13798 allowable uncertainty statistics*

### B.2.11 Density

The surface was analyzed using the HydrOffice QC Tools Grid QA feature to determine compliance with specifications. Density requirements for H13798 were achieved with at least 99.5+% of surface nodes containing five or more soundings as required by HSSD Section 5.2.2.3 (Figure below).

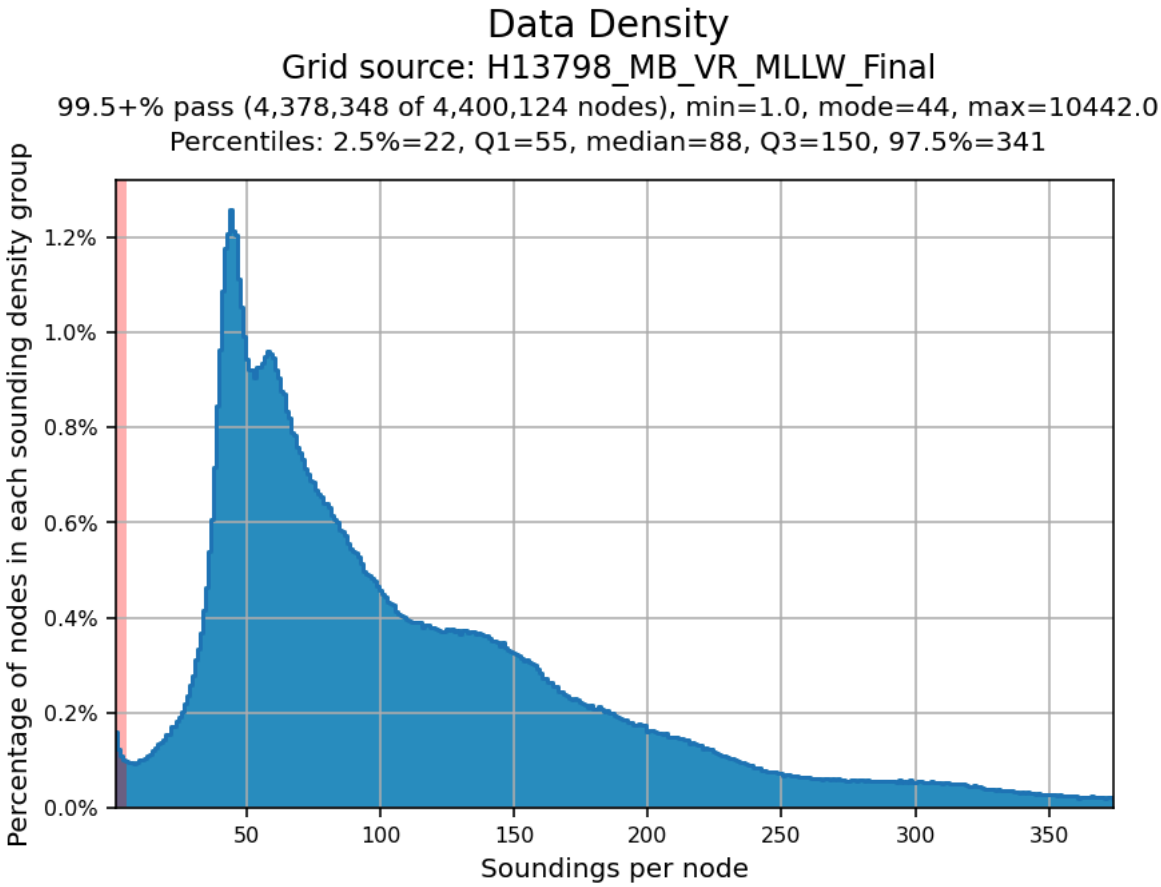



*Figure 13: H13798 data density statistics*

## B.3 Echo Sounding Corrections

### B.3.1 Corrections to Echo Soundings

All data reduction procedures conform to those detailed in the DAPR.

### B.3.2 Calibrations

All sounding systems were calibrated as detailed in the DAPR.

## B.4 Backscatter

Raw backscatter data were stored in the .kmall or .all files for Kongsberg systems. All backscatter were processed to GSF files and floating point mosaics were created by the field unit via Fledermaus FMGT 7.10.2. See Figure below for a greyscale representation of the complete mosaics. Four seperate backscatter mosaics were created, three are 2m based on 300kHz systems and one is a 6m for a 100KHz system.

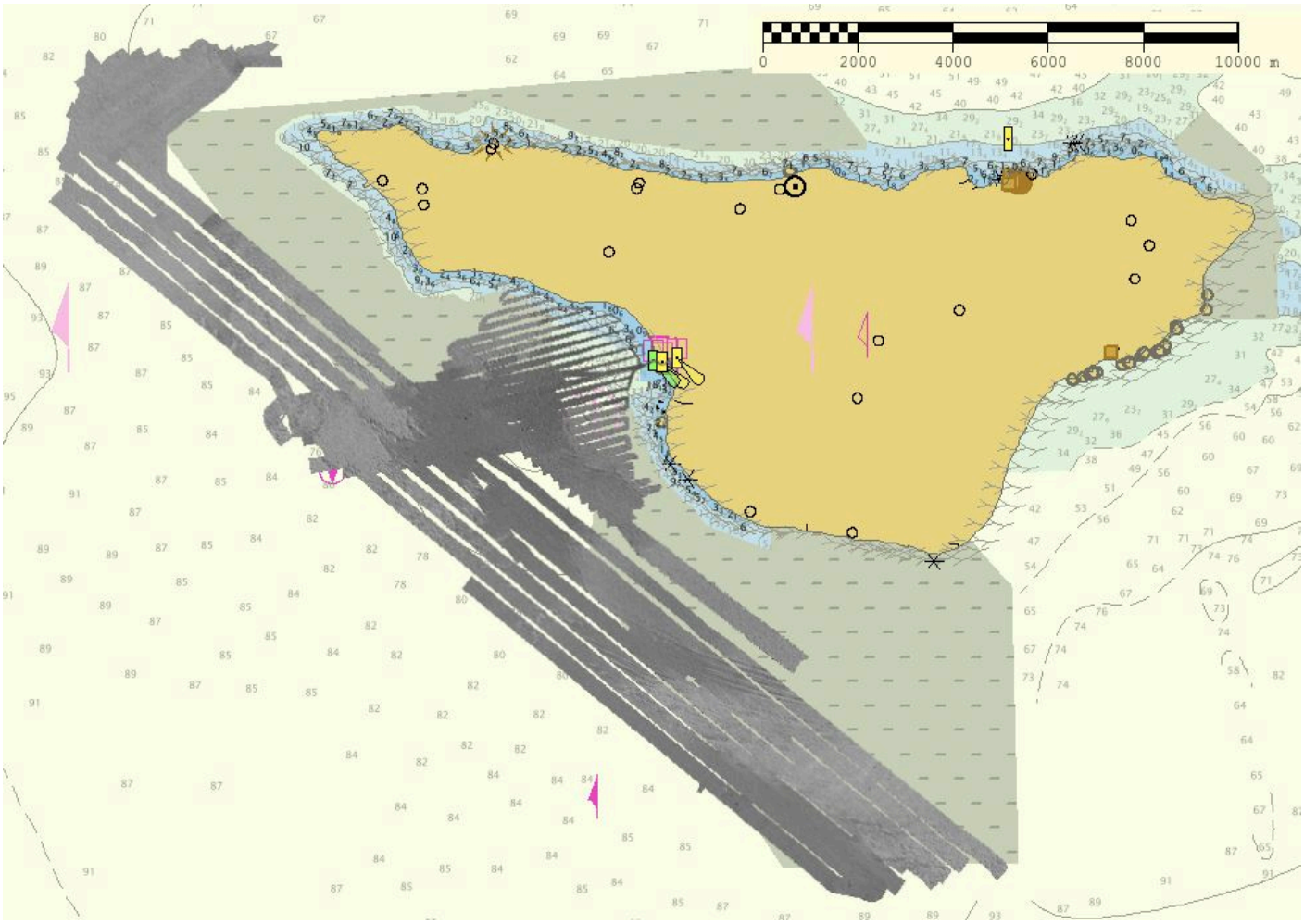



*Figure 14: Backscatter mosaics for H13798*

## B.5 Data Processing

### B.5.1 Primary Data Processing Software

The following software program was the primary program used for bathymetric data processing:

| Manufacturer | Name | Version |
|---|---|---|
| CARIS | HIPS and SIPS | 11.4 |

*Table 9: Primary bathymetric data processing software*

The following software program was the primary program used for imagery data processing:

| Manufacturer | Name | Version |
|---|---|---|
| QPS | Fledermaus | 7.10.2 |

*Table 10: Primary imagery data processing software*

The following Feature Object Catalog was used: NOAA Profile Version 2023.

### B.5.2 Surfaces

The following surfaces and/or BAGs were submitted to the Processing Branch:

| Surface Name | Surface Type | Resolution | Depth Range | Surface Parameter | Purpose |
|---|---|---|---|---|---|
| H13798_MB_VR_MLLW | CARIS VR Surface (CUBE) | Variable Resolution | 3.8 meters - 94.9 meters | NOAA_VR | MBES Set Line Spacing |
| H13798_MB_VR_MLLW_Final | CARIS VR Surface (CUBE) | Variable Resolution | 3.8 meters - 94.9 meters | NOAA_VR | MBES Set Line Spacing |

*Table 11: Submitted Surfaces*

The NOAA CUBE parameters defined in the HSSD were used for the creation of all CUBE surfaces for H13798. The surfaces have been reviewed where noisy data, or "fliers" are incorporated into the gridded solutions causing the surface to be shoaler or deeper than the true sea floor. Where these spurious soundings cause the gridded surface to vary from the reliably measured seabed by greater than the maximum allowable Total Vertical Uncertainty at that depth, the noisy data have been rejected by the hydrographer and the surface recomputed. Flier Finder, part of the QC Tools package within HydrOffice, was used to assist the search for spurious soundings following gross cleaning. Flier Finder was run iteratively until all remaining areas are deemed to be valid aspects of the surface.

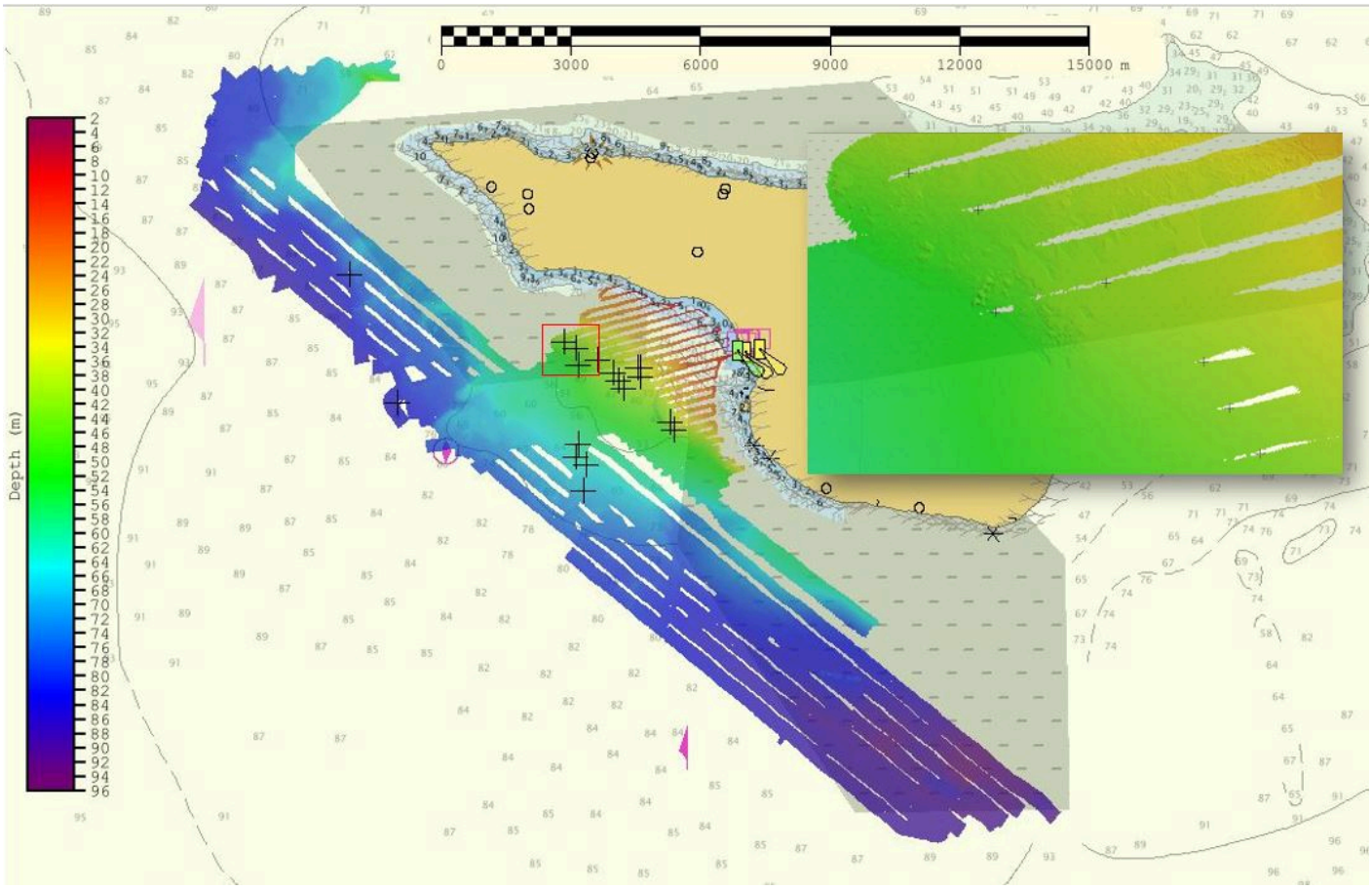



*Figure 15: Remaining 505 fliers deemed as valid aspects of the surface*

# 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.

ERS Datum Transformation

The following ellipsoid-to-chart vertical datum transformation was used:

| Method | Ellipsoid to Chart Datum Separation File |
|---|---|
| ERS via VDATUM | OPR-R344-FA-23_AK_ERTDM_2023_NAD83-MLLW |

*Table 12: ERS method and SEP file*

ERS methods were used as the final means of reducing H13798 to MLLW for submission.

## C.2 Horizontal Control

The horizontal datum for this project is North American Datum 1983 (2011).

The projection used for this project is Universal Transverse Mercator (UTM) Zone 2.

The following PPK methods were used for horizontal control:

- RTX

Vessel kinematic data were post-processed using Applanix POSPac processing software and RTX positioning methods described in the DAPR. Smoothed Best Estimate of Trajectory (SBET) and associated error (RMS) data were applied to all MBES data in CARIS HIPS and SIPS.

WAAS

During real-time acquisition, all platforms received correctors from the Wide Area Augmentation System (WAAS) for increased accuracies. WAAS and SBETs were the sole methods of positioning for H13798.

# D. Results and Recommendations

## D.1 Chart Comparison

Chart comparison between ENC and soundings from collected data. The soundings from H13798 are generally in agreement with charted soundings of ENC US4AK3QC and ENC US4AK3QD. The soundings in previously uncharted areas within H13798 follow the depth pattern of the mentioned ENCs. For previously uncharted areas new soundings are shown.

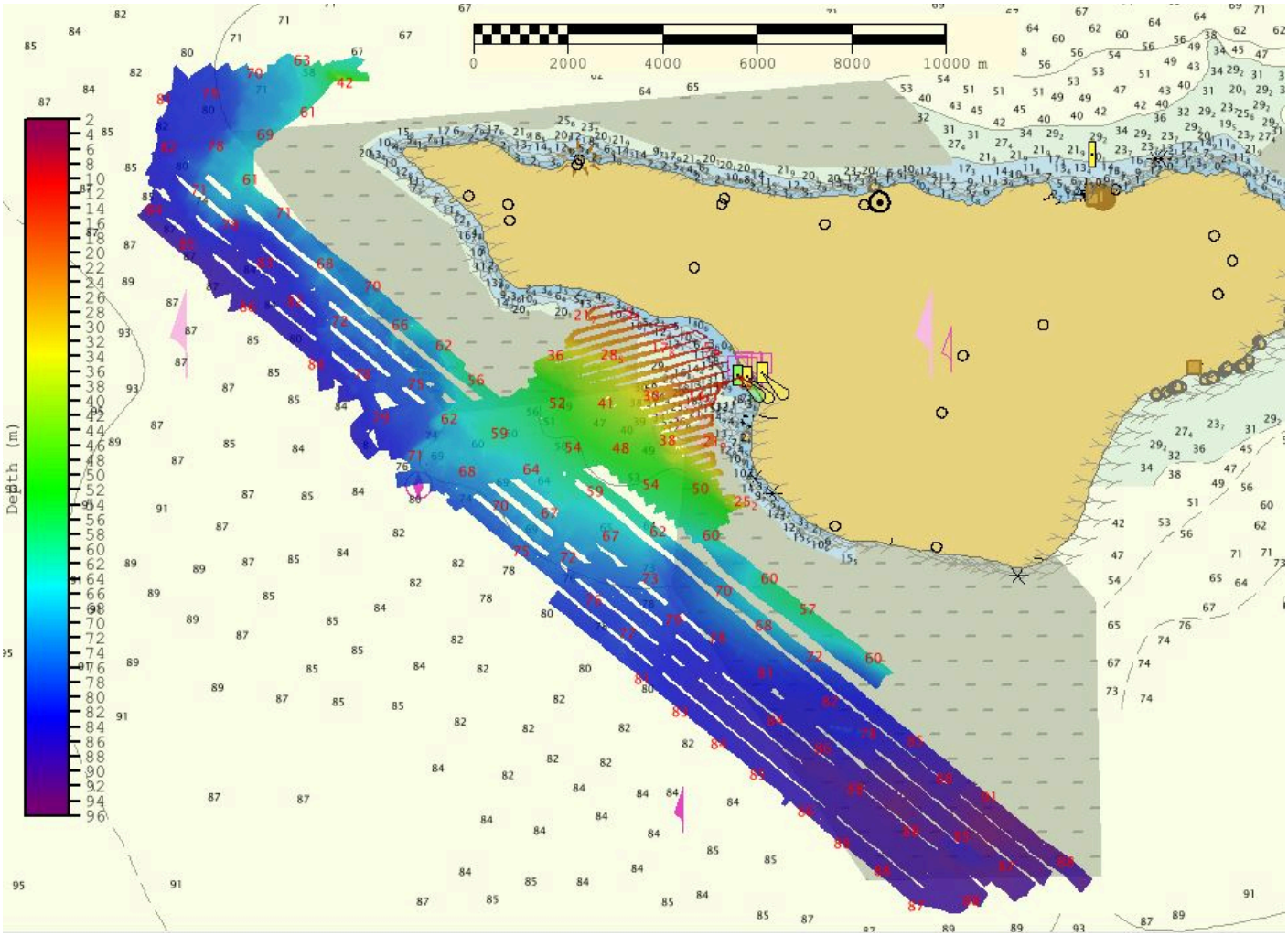



*Figure 16: Survey coverage with soundings (in red) overlaid onto ENC US4AK3QD and US4AK3QC*

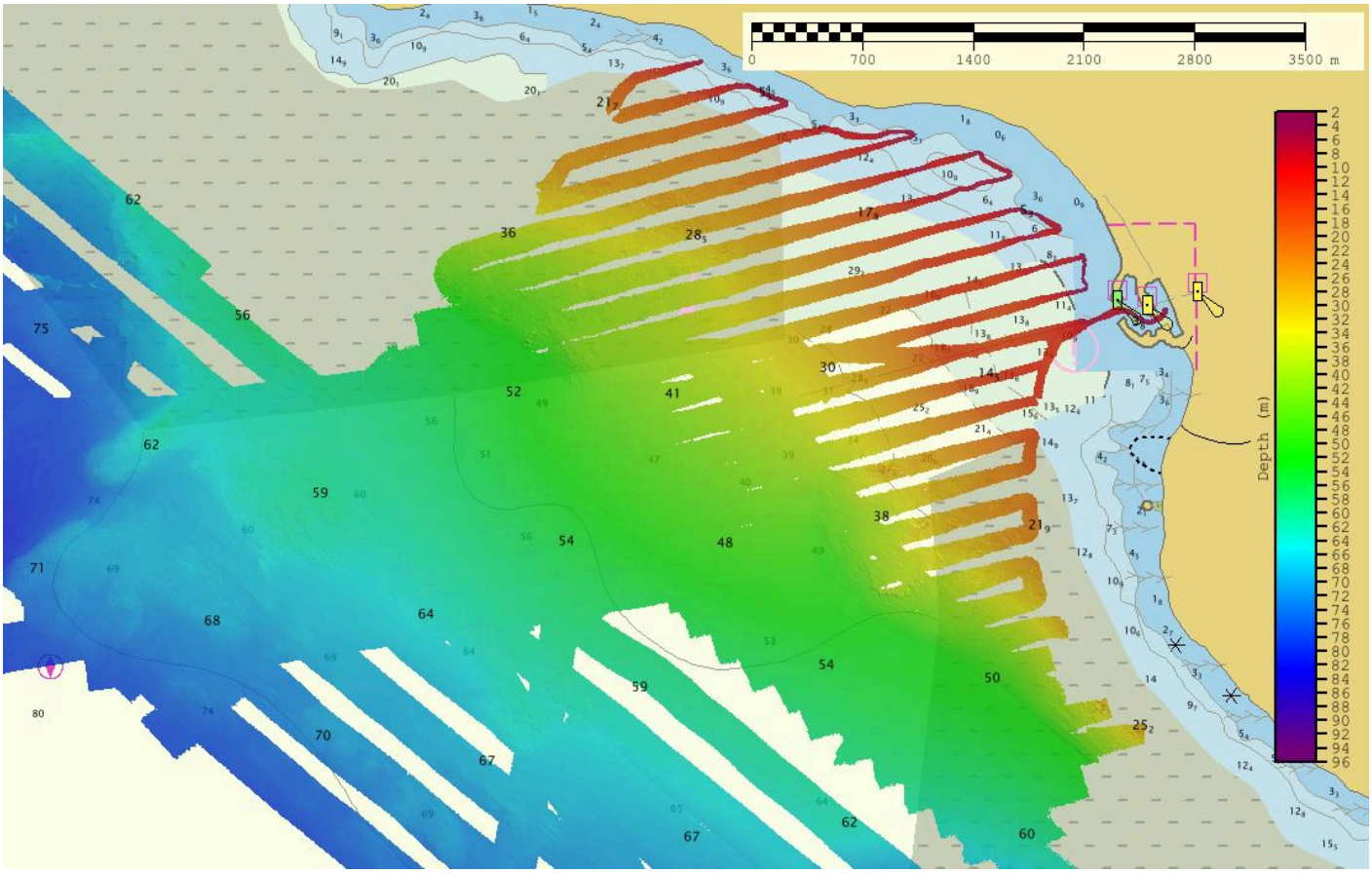



*Figure 17: Survey coverage in Zapadni Bay with soundings (in black) overlaid onto ENC US4AK3QD.*

### D.1.1 Electronic Navigational Charts

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

| ENC | Scale | Edition | Update Application Date | Issue Date |
|---|---|---|---|---|
| US4AK3QC | 1:40000 | 1 | 06/30/2020 | 03/23/2021 |
| US4AK3QD | 1:40000 | 1 | 06/30/2020 | 08/22/2023 |

*Table 13: Largest Scale ENCs*

### D.1.2 Shoal and Hazardous Features

There is a previously unidentified shoal approximately 2,130 m northwest from the island with a least depth of 42.7 meters.

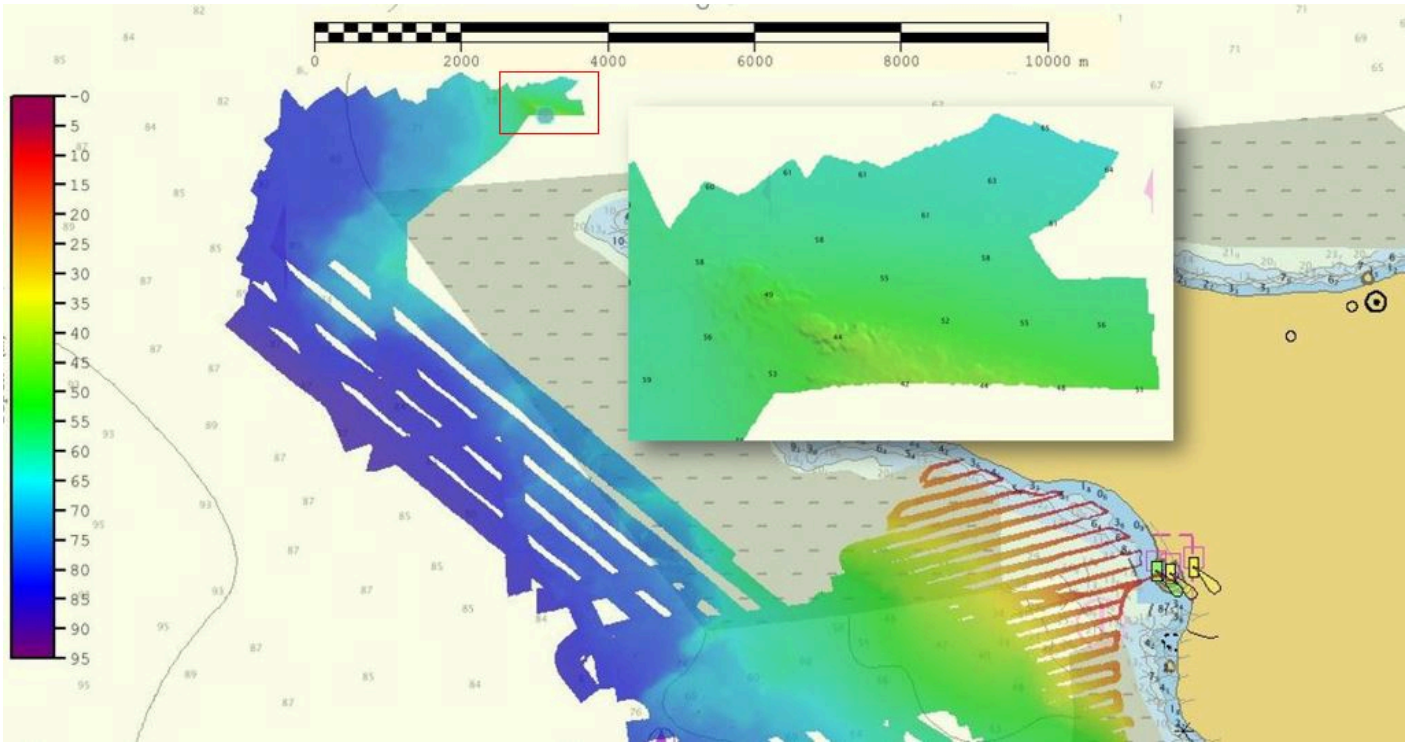



*Figure 18: Uncharted shoal located in the northwest corner of H13798*

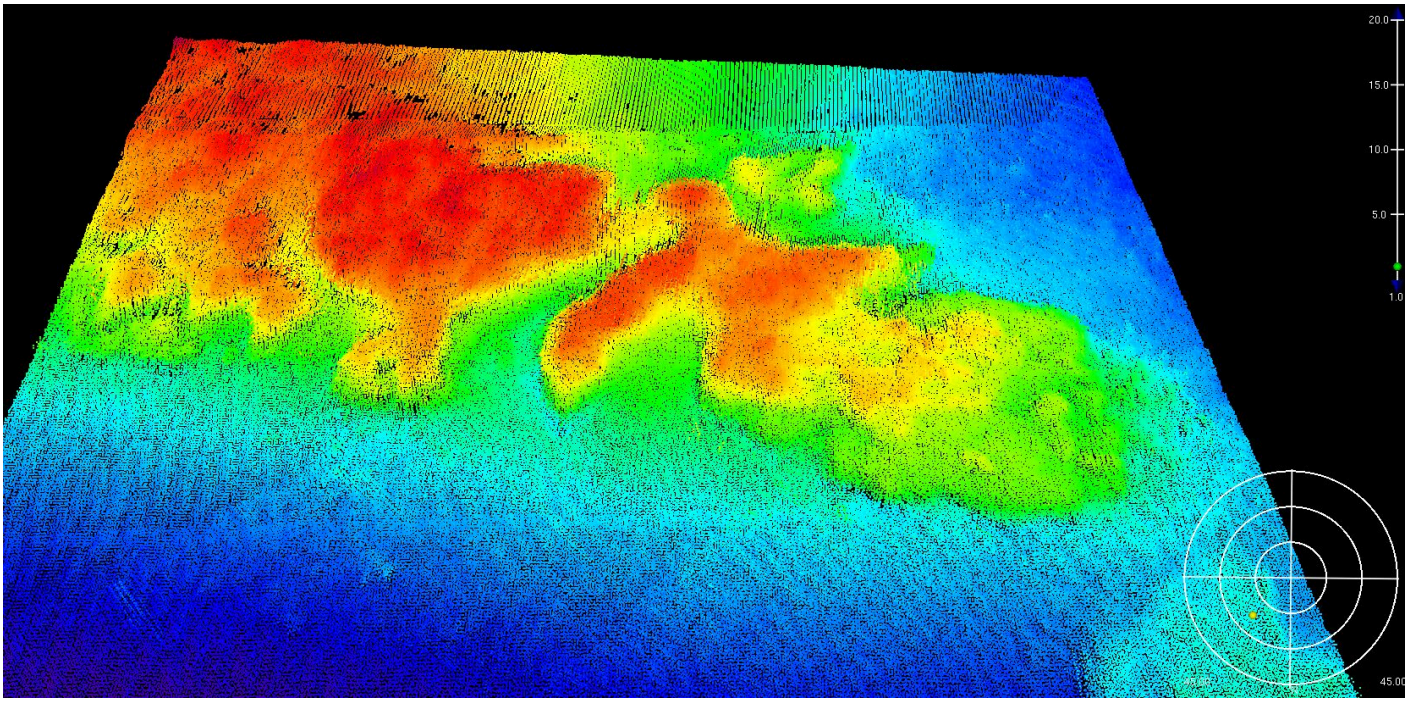



*Figure 19: 3D image of uncharted shoal in H13798*

### D.1.3 Charted Features

Charted features exist for this survey, but were not investigated.

### D.1.4 Uncharted Features

No uncharted features exist for this survey.

### D.1.5 Channels

No channels exist within the survey limits.

## D.2 Additional Results

### D.2.1 Aids to Navigation

ATONS in the harbor were seen and appeared to be functioning as intended.

### D.2.2 Maritime Boundary Points

No Maritime Boundary Points were assigned for this survey.

### D.2.3 Bottom Samples

Bottom samples were assigned for this survey, but were not acquired.

### D.2.4 Overhead Features

No overhead features exist for this survey.

### D.2.5 Submarine Features

No submarine features exist for this survey.

### D.2.6 Platforms

No platforms exist for this survey.

### D.2.7 Ferry Routes and Terminals

No ferry routes or terminals exist for this survey.

### D.2.8 Abnormal Seafloor or Environmental Conditions

No abnormal seafloor or environmental conditions exist for this survey.

### D.2.9 Construction and Dredging

The entrance channel from Zapadni Bay to the marina previously recorded at a dredged depth of 6m has a least depth of 3.8m.

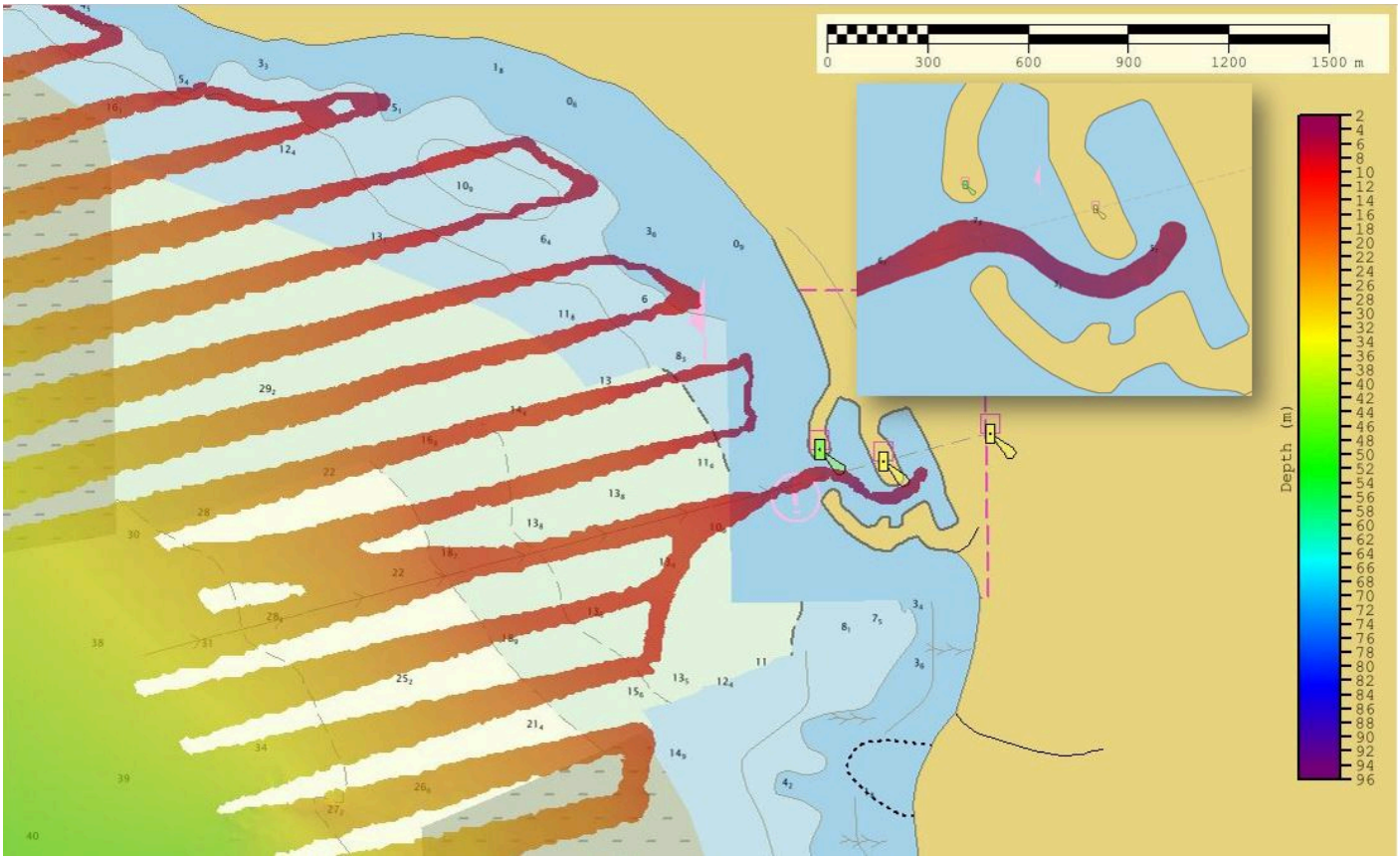



*Figure 20: Zapadni Bay channel with a least depth of less than 4 meters.*

### D.2.10 New Survey Recommendations

It is recommended to return to H13798 to complete the previously uncharted portion of the sheet that was not acquired due to weather and sea state conditions. In communication with St. George Island residents and the Mayor, a plan could be made for completing survey in the remaining areas as safely as possible.

### D.2.11 ENC Scale Recommendations

It is recommended to update the ENC to the best possible scale that includes all of the western section of St. George Island in one ENC.

# 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 Specifications and Deliverables, Field Procedures Manual, Letter Instructions, and all HSD Technical Directives. These data are adequate to supersede charted data in their common areas. This survey is complete and no additional work is required with the exception of deficiencies noted in the Descriptive Report.

| Approver Name | Approver Title | Approval Date | Signature |
|---|---|---|---|
| CDR Meghan McGovern | Commanding Officer | 11/07/2023 | Digitally signed by MCGOVERN.MEGHAN.ELIZABETH.1284020495 Date: 2024.03.19 13:53:46 -07'00' |
| LT Taylor Krabiel | Operations Officer | 11/07/2023 | KRABIEL.TAYLOR.ALAN.1539169935 Digitally signed by KRABIEL.TAYLOR.ALAN.1539169935 Date: 2024.03.19 13:58:14 -07'00' |
| ENS Ashley Howell | Sheet Manager | 11/07/2023 | |

# F. Table of Acronyms

| Acronym | Definition |
|---|---|
| **AHB** | Atlantic Hydrographic Branch |
| **AST** | Assistant Survey Technician |
| **ATON** | Aid to Navigation |
| **AWOIS** | Automated Wreck and Obstruction Information System |
| **BAG** | Bathymetric Attributed Grid |
| **BASE** | Bathymetry Associated with Statistical Error |
| **CO** | Commanding Officer |
| **CO-OPS** | Center for Operational Products and Services |
| **CORS** | Continuously Operating Reference Station |
| **CTD** | Conductivity Temperature Depth |
| **CEF** | Chart Evaluation File |
| **CSF** | Composite Source File |
| **CST** | Chief Survey Technician |
| **CUBE** | Combined Uncertainty and Bathymetry Estimator |
| **DAPR** | Data Acquisition and Processing Report |
| **DGPS** | Differential Global Positioning System |
| **DP** | Detached Position |
| **DR** | Descriptive Report |
| **DTON** | Danger to Navigation |
| **ENC** | Electronic Navigational Chart |
| **ERS** | Ellipsoidal Referenced Survey |
| **ERTDM** | Ellipsoidally Referenced Tidal Datum Model |
| **ERZT** | Ellipsoidally Referenced Zoned Tides |
| **FFF** | Final Feature File |
| **FOO** | Field Operations Officer |
| **FPM** | Field Procedures Manual |
| **GAMS** | GPS Azimuth Measurement Subsystem |
| **GC** | Geographic Cell |
| **GPS** | Global Positioning System |
| **HIPS** | Hydrographic Information Processing System |
| **HSD** | Hydrographic Surveys Division |

| Acronym | Definition |
|---|---|
| **HSSD** | Hydrographic Survey Specifications and Deliverables |
| **HSTB** | Hydrographic Systems Technology Branch |
| **HSX** | Hypack Hysweep File Format |
| **HTD** | Hydrographic Surveys Technical Directive |
| **HVCR** | Horizontal and Vertical Control Report |
| **HVF** | HIPS Vessel File |
| **IHO** | International Hydrographic Organization |
| **IMU** | Inertial Motion Unit |
| **ITRF** | International Terrestrial Reference Frame |
| **LNM** | Linear Nautical Miles |
| **MBAB** | Multibeam Echosounder Acoustic Backscatter |
| **MCD** | Marine Chart Division |
| **MHW** | Mean High Water |
| **MLLW** | Mean Lower Low Water |
| **NAD 83** | North American Datum of 1983 |
| **NALL** | Navigable Area Limit Line |
| **NTM** | Notice to Mariners |
| **NMEA** | National Marine Electronics Association |
| **NOAA** | National Oceanic and Atmospheric Administration |
| **NOS** | National Ocean Service |
| **NRT** | Navigation Response Team |
| **NSD** | Navigation Services Division |
| **OCS** | Office of Coast Survey |
| **OMAO** | Office of Marine and Aviation Operations (NOAA) |
| **OPS** | Operations Branch |
| **MBES** | Multibeam Echosounder |
| **NWLON** | National Water Level Observation Network |
| **PDBS** | Phase Differencing Bathymetric Sonar |
| **PHB** | Pacific Hydrographic Branch |
| **POS/MV** | Position and Orientation System for Marine Vessels |
| **PPK** | Post Processed Kinematic |
| **PPP** | Precise Point Positioning |
| **PPS** | Pulse per second |

| Acronym | Definition |
|---|---|
| **PRF** | Project Reference File |
| **PS** | Physical Scientist |
| **RNC** | Raster Navigational Chart |
| **RTK** | Real Time Kinematic |
| **RTX** | Real Time Extended |
| **SBES** | Singlebeam Echosounder |
| **SBET** | Smooth Best Estimate and Trajectory |
| **SNM** | Square Nautical Miles |
| **SSS** | Side Scan Sonar |
| **SSSAB** | Side Scan Sonar Acoustic Backscatter |
| **ST** | Survey Technician |
| **SVP** | Sound Velocity Profiler |
| **TCARI** | Tidal Constituent And Residual Interpolation |
| **TPU** | Total Propagated Uncertainty |
| **USACE** | United States Army Corps of Engineers |
| **USCG** | United States Coast Guard |
| **UTM** | Universal Transverse Mercator |
| **XO** | Executive Officer |
| **ZDF** | Zone Definition File |