U.S. DEPARTMENT OF COMMERCE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

HORIZONTAL AND VERTICAL CONTROL REPORT

Type of Survey Navigable Area

Project No. OPR-R340-KR-23

Time Frame June – September, 2023

LOCALITY

State Alaska

General Locality Bristol Bay

2023

CHIEF OF PARTY

ANDREW ORTHMANN

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DATE

Horizontal and Vertical Control Report

OPR-R340-KR-23

Bristol Bay, AK

January 15th, 2024

Upper Kvichak Bay

Project Name:	***Bristol Bay, AK***
General Locality:	***Bristol Bay***
Registry Numbers:	***H13714 through H13726, F00875 and F00876***
Vessel(s):	***Arctic Seal, ASV-CW5, and LC-25***
Field Unit:	***TerraSond***
Lead Hydrographer:	***Andrew Orthmann***

A. Vertical Control

Mean lower low water (MLLW) was the vertical control datum for this survey. All soundings are referenced to MLLW.

All time measurements were made in Universal Time Coordinated (UTC). The local time zone was offset from UTC by eight hours (Alaska Daylight Time = UTC – 8 hours). No measurements were made using local time.

A.1. Tide Corrector Stations

No tertiary tide stations were installed for this project.

A.2. Tide Equipment

No tide equipment was utilized on this project.

A.3. Tide Correctors

Tidal corrections for hydrography was accomplished using ERS methodology. The WGS84 to MLLW grid file "OPR-R340-KR-23_AK_ERTDM_2023_WGS84(G2139)-MLLW_" provided by NOAA was used for all corrections. The grid file has an estimated uncertainty of 0.18 m (specified in the Project Instructions). Refer to the DRs for correspondence relating to this grid file.

B. Horizontal Control

The horizontal control datum used for this survey was WGS84. All final positions are WGS84.

Vessel positions were post-processed in Applanix POSPac MMS (v8.9) software using the Trimble PP-RTX corrections service. A small number of survey lines were subsequently post-processed during office processing with Applanix Smart Base (ASB) to address vertical busts. These are itemized when they occurred in the applicable Descriptive Report.

Real-time positions were provided by either Atlas H10 SBAS RTK correctors or FAA WAAS, on ITRF2008. However, all real-time corrections were replaced in post-processing for final data with WGS84 SBET solutions. Refer to the DAPR for details on positioning methodology.

Vessel position confidence checks were performed by comparing PPRTX and ASB methodology, with good results. These checks are available with each DR.

Correspondence relating to tides are also available with the project DRs.

Post-processed positioning data and GNSS processing files are available with the survey deliverables.

APPROVAL SHEET

For

Horizontal and Vertical Control Report: H13714 through H13726, F00875, and F00876

This report and the accompanying digital data are respectfully submitted.

Field operations contributing to the completion of this project were conducted under my direct supervision with frequent personal checks of progress and adequacy. This report, digital data, and accompanying records have been closely reviewed and are considered complete and adequate per the Statement of Work and Project Work Instructions. Other reports submitted with this survey include the Descriptive Report (DR) (one for each survey sheet) and the Data Acquisition and Processing Report (DAPR).

This survey is complete and adequate for its intended purpose.

Andrew Orthmann

Digitally signed by Andrew Orthmann
Date: 2024.01.15 17:55:22 -09'00'

Andrew Orthmann
NSPS/THSOA Certified Hydrographer (2005), Certificate No. 225
Charting Program Manager
TerraSond