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 Methods Used:

ERS via VDATUM

Ellipsoid to Chart Datum Separation File:

shapefile_xyNAD83-MLLW_geoid12b.csar

C.2 Horizontal Control

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

The projection used for this project is Universal Transverse Mercator (UTM) Zone 10 North.

Precise Positioning-Real Time Extended (PP-RTX) processing methods were used in Applanix POSPac MMS 8.1 software to produce Smooth Best Estimates of Trajectory (SBETs) for post-processing horizontal correction.

C.3 Additional Horizontal or Vertical Control Issues

C.3.1 Missing SBET Data

On Line 54 of DN 230, the SBET data was corrupted by an error in the Inertial Measurement Unit of the POS M/V system referenced in Table 6. This resulted in a loss of SBET data from 1748:51 to 1749:21 UTC of DN 231. Though the data was collected on DN 231 UTC, the raw and processed line is named using the naming convention for DN230. This 30 second gap does have real-time position and attitude data applied to it. In Caris navigation editor, the navigation data through the gap appears unaffected by the gap other than a nearly instantaneous spike (<0.5 S) at the end of the gap. The SBET data was applied to the remainder of the line, and the bathymetry data was analyzed in Caris subset editor for continuity with surrounding lines. There was no discernible effect on the individual soundings, the uncertainty, or the surface.