



Figure 18: Example of offset data between DN231 (on the left) and DN293 (on the right).

C. Vertical and Horizontal Control

Because the field unit did not install additional vertical and horizontal control stations an HVCR was not required for this survey.

C.1 Vertical Control

The vertical datum for this project is Low Water Datum (LWD).

Traditional Methods Used:

Discrete Zoning

The following National Water Level Observation Network (NWLON) stations served as datum control for this survey:

Station Name	Station ID
Alpena, MI	9075065

Table 11: NWLON Tide Stations

File Name	Status
9075065.tid	Final Approved

Table 12: Water Level Files (.tid)

File Name	Status
X937NMS2016CORP.zdf	Final

Table 13: Tide Correctors (.zdf or .tc)

A request for final approved tides was sent to N/OPS1 on 11/16/2016. The final tide note was received on 11/22/2016.

C.2 Horizontal Control

The horizontal datum for this project is World Geodetic System 1984 (WGS84).

The projection used for this project is 17N (EPSG: 32617).

DGPS was used for real-time positioning during acquisition.

The following DGPS Stations were used for horizontal control:

DGPS Stations
Cheboygan, MI (292kHz)

Table 14: USCG DGPS Stations

D. Results and Recommendations

D.1 Chart Comparison

The hydrographer has compared a sounding plot from the surveyed area to the charted soundings. There are no charted contours to compare.