### B.4. Data Processing

#### B.4.1. Coverage BASE Surfaces and Mosaics

Multibeam data processing was conducted using CARIS HIPS/SIPS 6.1 SP2 on the vessel and CARIS HIPS/SIPS 7.1.1 SP1 and SP1Hotfix1. One BASE surface was created for each subarea at a scale of 1:40000 with a resolution of 1 m, in accordance with Section 5.2.2.2 and 5.2.2.3 of the HSSD (2010), which states that a 1-m BASE surface will be created for 0 – 22 m water depths. One BASE surface was created for investigations at a scale of 1:40000 and a resolution of 0.5 m.

The majority of the side-scan sonar data was processed using Chesapeake Technologies SonarWiz4 V.4.04.0118. However, due to a measurement issue of contacts in Subarea 2, the project was converted into a SonarWiz5 V5.04.0022 compatible format in order to be able to obtain accurate shadow measurements. All of the side-scan sonar data collected for this project has been layback corrected. 1-m resolution mosaics were created for even and odd lines in each subarea to ensure 100% SSS coverage mosaics.

#### B.4.2. SSS Imagery and Contacts

Side scan sonar data was evaluated twice and all contacts with a shadow identified on each 100% SSS coverage. These contacts were correlated and evaluated in either the CARIS HIPS/SIPS or CARIS Notebook map window with respect to BASE surfaces and charted information. In accordance with Section 6.3.2 of the HSSD (2010), in water depths of less than or equal to 20 m, contacts with heights computed from the shadow length of 1 m or more were considered significant. All significant contacts not fully developed with mainscheme MBES coverage were investigated with additional MBES coverage. A sounding that represented the least depth of each significant contact was designated using CARIS HIPS/SIPS; least depths of insignificant contacts and pipelines are labeled ‘Examined’. A list of all side scan sonar contacts is contained in Separate V and significant features are represented and attributed in the S-57 feature file. Refer to the Data Acquisition and Processing Report for details on the side scan sonar contact processing and correlation workflow.

### C. VERTICAL AND HORIZONTAL CONTROL

The vertical datum for the soundings is Mean Lower Low Water (MLLW). Tide and water level corrections were determined and applied in accordance with the CO-OPS Statement of Work. Data from Port Fourchon, LA (8762075) was used as the source of tides. Verified tides with final tide zoning were applied to the data.