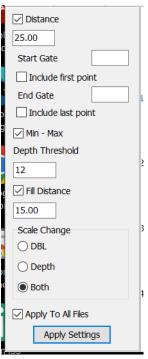# Additions to the Sounding Selection Options
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Thinning out your sounding data is useful for removing unnecessary excess, bad points, and areas of data that are irrelevant. The Sounding Selection program has a couple of ways that you can, as the name suggests, select specific soundings quickly depending on your needs. The sounding selection options on the left toolbar in the Sounding Selection window will be explained in order to help you select the best data for your project. Since the Distance option now has added functionality, I will start there, then go more into depth with subsequent choices.

SELECTING SOUNDINGS BASED ON DISTANCE

When you open the Sounding Selection program, the left toolbar contains all available selection methods, with **Distance** as the first check box. The **box below Distance** allows you to set the distance between subsequent points to be selected. The higher the number, the sparser the final data set. Next comes the new options:

The **Start Gate** is where you will begin selecting points from. For example, if you do not need the first bit of data because it is too far from your trackline, you could set the Start Gate to 200 m. If the box is left blank, no start gate will be used. The **End Gate** works in a similar fashion, use it to set where to stop selecting any more soundings. If left blank, the end of each line will be used.

When you enable Distance and set the values for distance (ie: X meters), start gate, and end gate, the program skips all soundings until the start gate, finds and selects a point every X meters, and then stops when it reaches the end gate. If you have checked the **Apply To All Files** box at the bottom of the left side panel, this sounding selection process is completed for all of the currently loaded lines.

Additionally, Start Gate and End Gate have the **Include First Point** and **Include Last Point** checkboxes, respectively. As stated above, when the algorithm functions normally, the first point located X distance into the data (plus the Start Gate distance if applicable) is selected. If you would like to keep the original starting point of the line, check the Include First Point box, and if you would like to include the very last point, check the Include Last Point box, since the final point may fall in between selections.

Selecting Soundings Based on Data Inflection Points

Another way to choose what sounding points to keep is based on the data inflection points. When **Min - Max** is enabled, the value entered affects how much rise or fall in the data will result in a selection.

A smaller threshold will select soundings at smaller changes in the contours of your data than larger numbers resulting in more data being kept. A good way to use the **Depth Threshold** option is to begin with the default value of 3 and increase or decrease the value based on the result to suit the purpose of your data set. Once you have what you would like, you have the additional option of setting the **Fill Distance**. The Fill Distance selects soundings at the user-defined interval between the soundings selected at the inflection points.