How to Superimpose a Vertical Construction Over the TIN Model

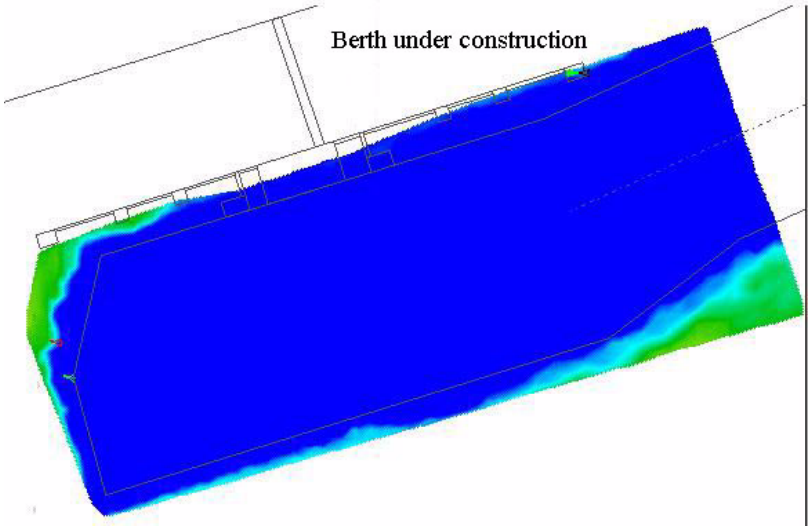
By Ivan Izaak

From time to time it may be useful to superimpose a construction with the vertical wall (for example, berth line or breakwater) over the terrain model to see how good the surrounding bottom is.

One of the easy ways to do that is to use TIN MODEL.

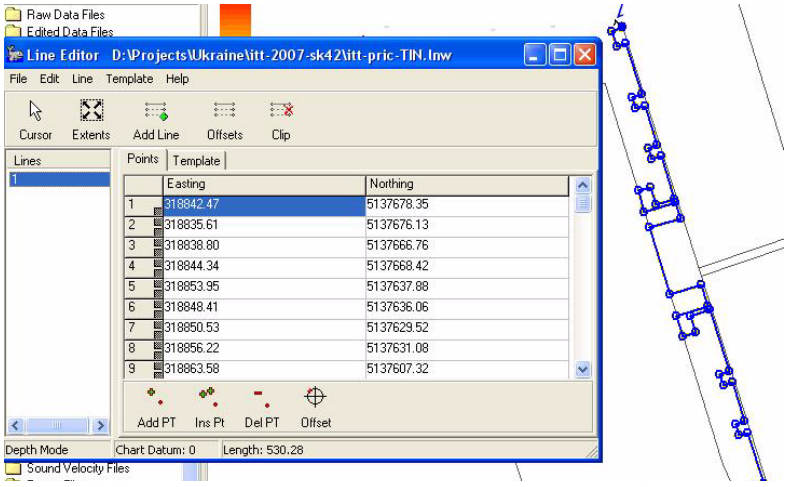
1. **Get a dataset from MB survey near the construction**. In this example, we will use an XYZ data set, but TIN MODEL also accepts All format and filled matrix files.

FIGURE 1. *Survey area of the constructing birth area*



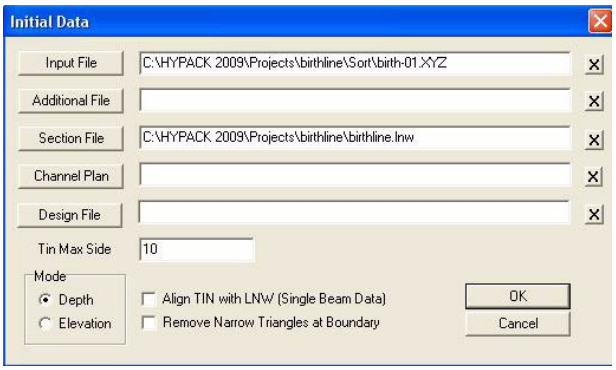
2. **Draw a planned line that represents the construction** in LINE EDITOR. (In this example, it is only a vertical wall underwater.)

FIGURE 2. *Planned line, delineating a berth.*



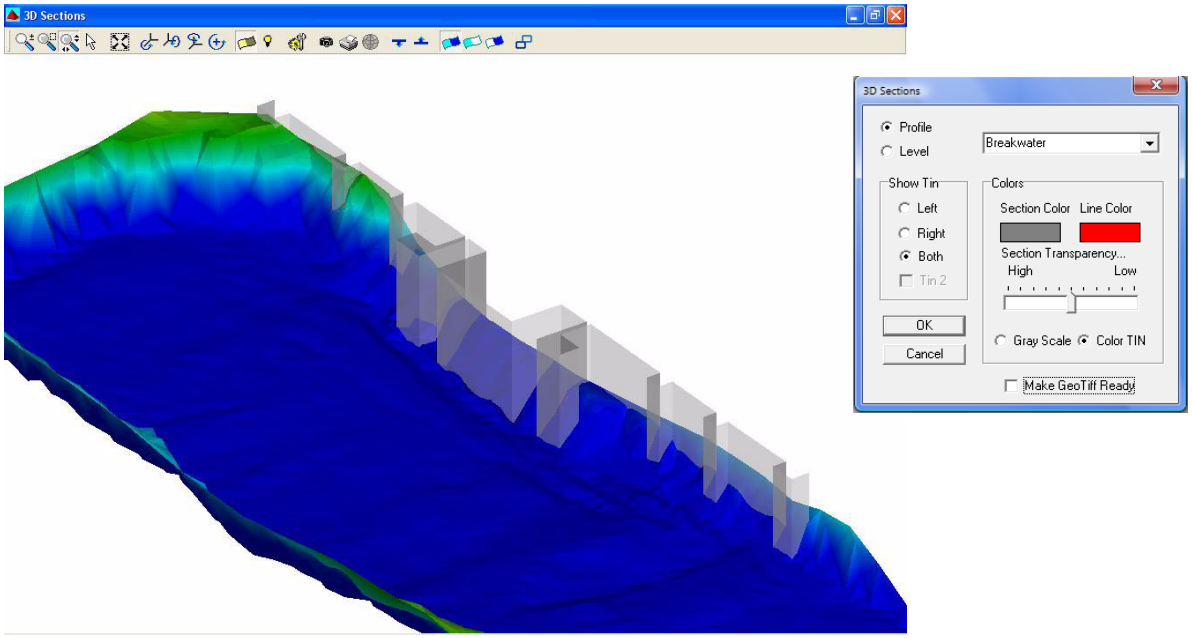
3. **Include the planned line file when you build your TIN model.** In the TIN MODEL program's Initial Data dialog, enter the survey data as the Input Data and the planned line representing the construction as the Section File.

FIGURE 3. *Input data for the TIN MODEL.*



4. **Open your 3D model in 3D Sections view**.

FIGURE 4. *View of the berth line over 3D model in 3D Sections.*



5. **In the 3D Sections Setup, select the 'Profile' display** to show the line file of your construction.

Additional View Options:

- You may find it very useful to set a medium transparency for the displayed line file to see the data behind it.
- There is an option to display the TIN model in front or behind the construction or to display the complete model (as in Figure 4).

If you have more than one berth (or breakwater), you can define each with a different line in the planned line file. In this case, you can quickly go to the next or previous line using “Next Section” or “Previous Section” icons on the TIN 3D Sections display panel.

Below are some examples of the 3D models with the breakwaters (planned ones) with different transparency and “Show TIN” settings.

FIGURE 5. *Fig. 5Planned breakwater. Semitransparent breakwater is superimposed.*

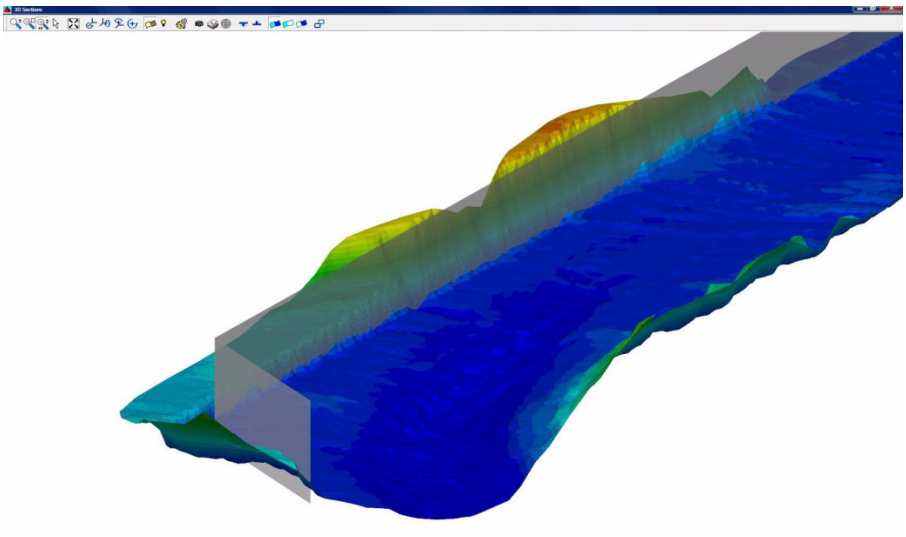
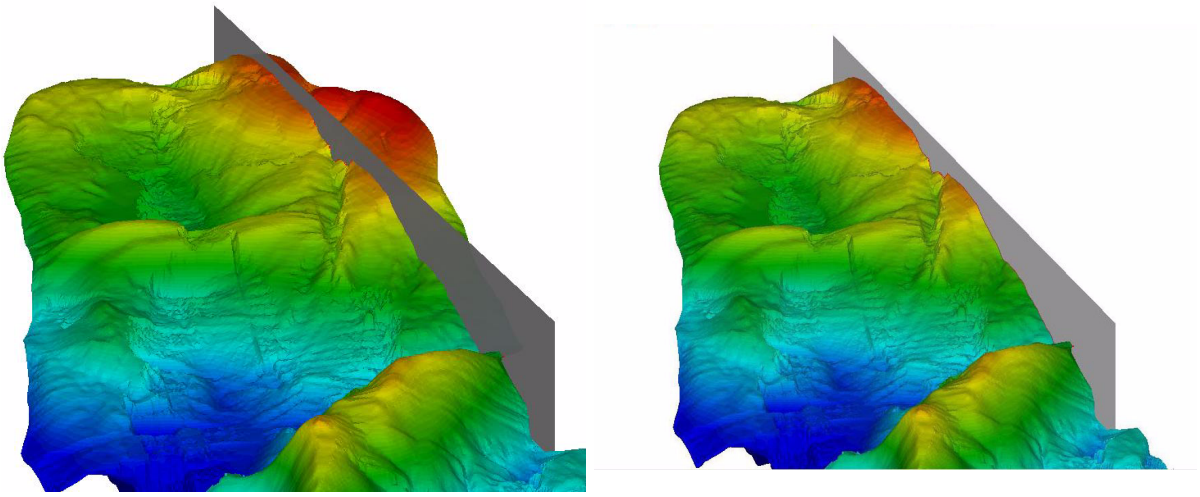
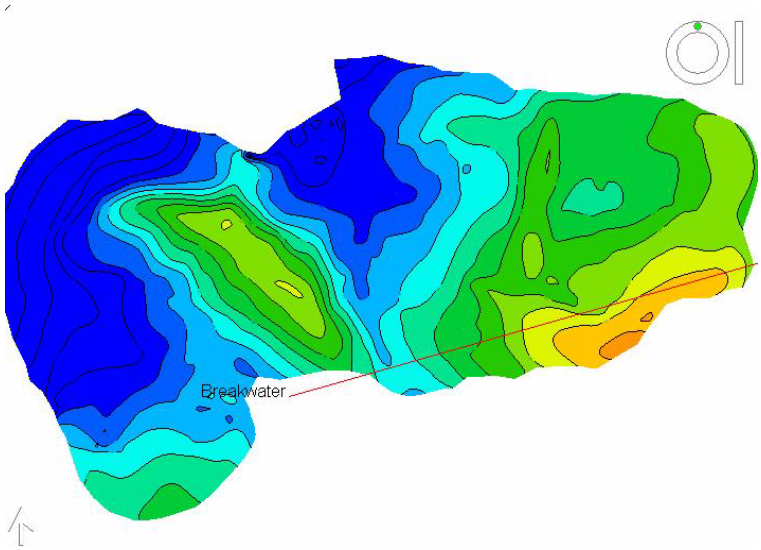


FIGURE 6. *Planned Breakwater with both TINs displayed (left) and only left TIN displayed (right)*



Now let’s see the same breakwater in 2D view.

FIGURE 7. *Fig. 72D view of the breakwater in the main HYPACK® window.*



As you see, the 3D view will tell you more than the 2D view and can provide a better evaluation of the construction area.