HYPACK
a xylem brand

Sounding Better!

Creating a Channel Design for a Lake

By Cristhian Bermudez

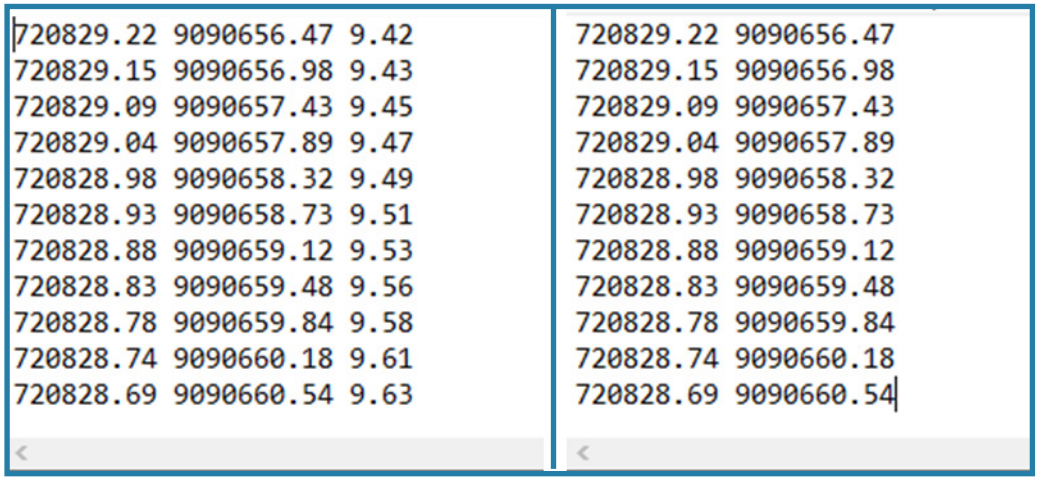
Recently, I conducted a training in Argentina for the operation of a cutter suction dredge, the user was digging an artificial lake. They wanted to use a XYZ file with 350 nodes as a digging plan. Doing that in Advanced Channel Design can be a long task. With the following steps, you can create the digging plan for the lake using a border.

In this example, I had a XYZ file with points that defined the perimeter of the lake bottom.

1. **Convert the perimeter XYZ file to a border file.** To do that I just had to remove the third column in the XYZ file and saved it with the BRD extension.

Tip: Alternatively, you can use the File Import function in the Border Editor to read your XY coordinates and save them to a border file.

FIGURE 1. *Converting a XYZ to a Border File—XYZ (left) and BRD (right)*



```
720829.22 9090656.47 9.42
720829.15 9090656.98 9.43
720829.09 9090657.43 9.45
720829.04 9090657.89 9.47
720828.98 9090658.32 9.49
720828.93 9090658.73 9.51
720828.88 9090659.12 9.53
720828.83 9090659.48 9.56
720828.78 9090659.84 9.58
720828.74 9090660.18 9.61
720828.69 9090660.54 9.63
```

```
720829.22 9090656.47
720829.15 9090656.98
720829.09 9090657.43
720829.04 9090657.89
720828.98 9090658.32
720828.93 9090658.73
720828.88 9090659.12
720828.83 9090659.48
720828.78 9090659.84
720828.74 9090660.18
720828.69 9090660.54
```

2. **Open ADVANCED CHANNEL DESIGN.**
3. **In the Faces tab, load the BRD file.**
   a. **Click the Add Left Toes icon.** The Left Side Slope dialog appears.
   b. **Click the ellipsis button by the Nodes field and select the border file.**
   c. **Enter the slope, toe depth and border depth and enable the Close Polyline option**.
   d. **Click [Apply]** to create the slopes.

FIGURE 2. *Opening the Border in ACD*

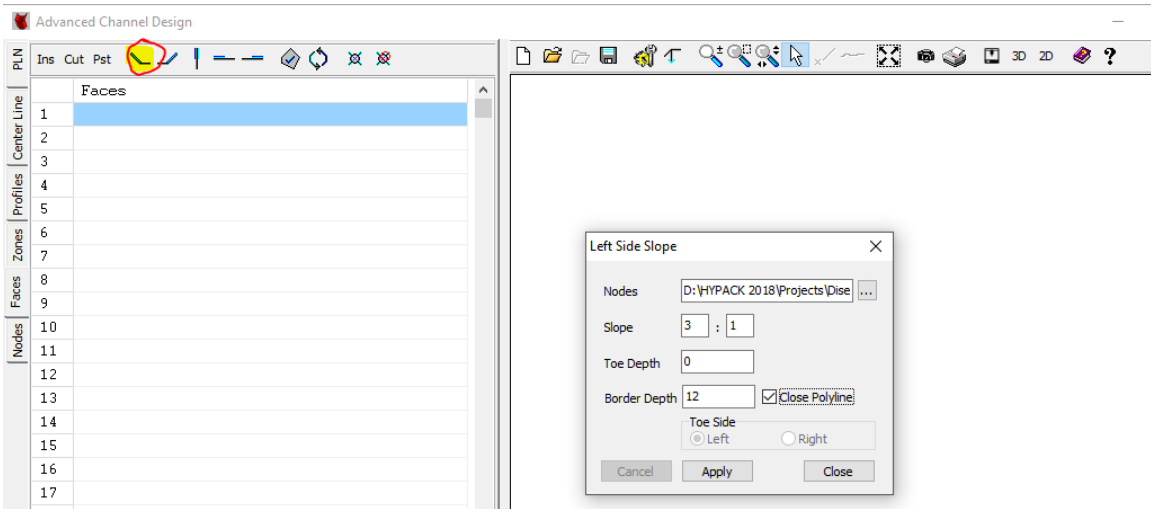
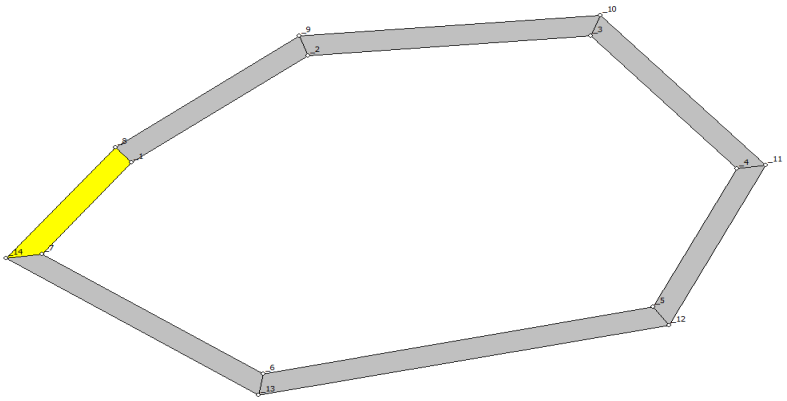


FIGURE 3. *Slopes created with ACD*



4. **Create the center of the channel.** You must add all of the nodes that are in the bottom of the design. In this case, I added the following nodes: _1, _2, _3, _4, _5, _6, _7.

FIGURE 4. *FIGURE 4. Creating the Face in the Center of the Channel*

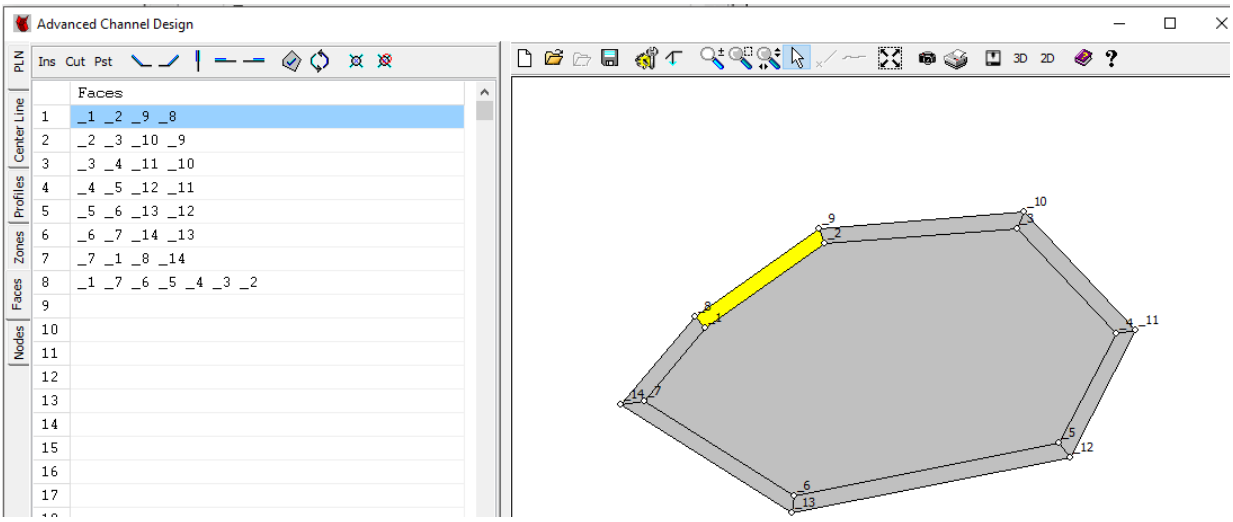


FIGURE 5. *3D View of the Digging Plan*