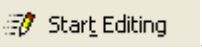


1 Sketching cross section panels

In this step you will sketch new cross section panels. We will use the boreline data and outcrops as guides. We will utilize the advance editing capabilities available in ArcMap.

1.1 Setting the editor options

The first steps will be to set the editing environment:

1. Make sure a cross section (A-A' or B-B') data frame is activated.
2. Select the *Editor / Start Editing* option .
3. Set the snapping environment by selecting the *Editor / Snapping* option. Specify the snapping environments for the XS2Outcrop_1, XS2D_BoreLine_1, XS2D_Panel_1, and XS2D_PanelDivider_1 layers, as shown in Figure 1 (if you are editing the B-B' cross section you will use 2 in the layer names).

The order of the layers within the snapping environment interface determines the snapping priority. You can move the layers by selecting them and moving them up or down.

4. Make sure that the layers are in the order shown in Figure 1.

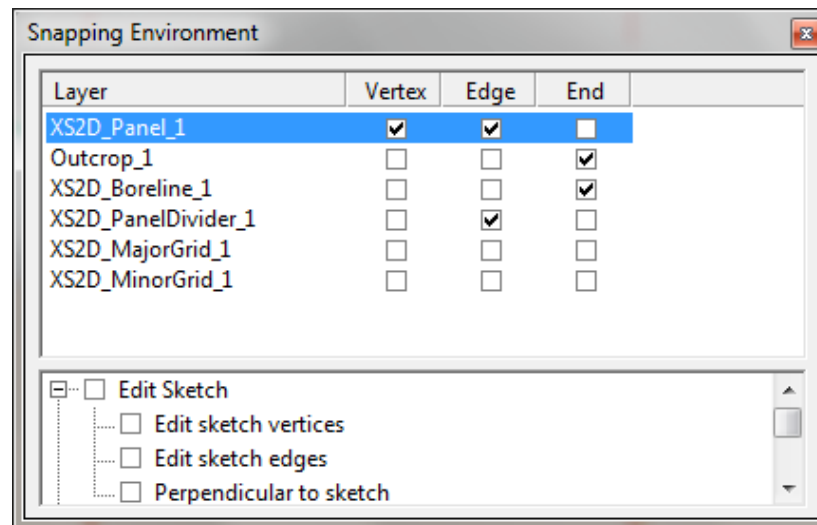


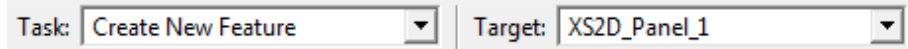
Figure 1 Snapping environment settings.

While editing you can enable Snap Tips that will show you the features to which your new features are being snapped.

5. Go to *Editor / Options*. In the *General* tab check the option *Show snap tips*.


1.2 Sketching panels

1. Make sure the current task is set for creating new panel features.




We will use the *Trace* editing tool to trace the outcrop as part of the cross section creation. To better visualize a single outcrop we can use the filter tool in the AHGW Toolbar.


2. Zoom to the right end of the cross section and zoom in on the outcrop representing HGUID = 2.

3. Select the outcrop feature using the Edit tool . If you are having problems selecting the feature make sure it is enabled in the *Selection / Set Selectable Layers* interface.

Tip: while you are digitizing you can use the zoom and pan tools to focus on certain elements of the cross section.

4. Select the trace editing tool in the Editor menu .
5. Start tracing the selected outcrop. Start tracing from the right side by clicking on the edge of the line, then drag the mouse over the outcrop line, you should see the new line created as you move the mouse to the left side of the outcrop. When you reach the end of the outcrop line click on the edge to create a vertex.

Your sketch should be similar to the one shown in Step 1 of Figure 2.

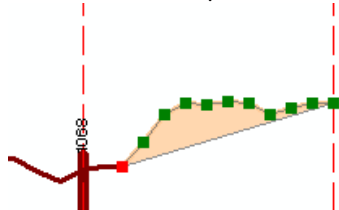
6. Switch to the Editor Sketch tool , and continue sketching a cross section panel. Your guiding points should be the boreline edges. The sketch tool should automatically snap to the end of the boreline features as you digitize. Make sure to snap also to the panel dividers defining the start and end of the cross section.

Your sketch should be similar to the one shown in Step 2 of Figure 2.

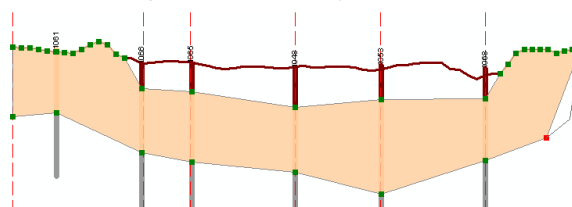
7. Make sure to reach the right side panel divider as shown in Step 3 of Figure 2.
8. Right click, and select *Finish Sketch* to close the panel you digitized.

Your sketch should be similar to the one shown in Step 4 of Figure 2. Next you will assign some basic attributes to the panel.

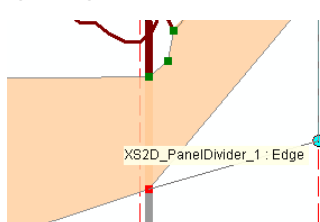
Step 1: Use the trace tool to trace the outcrop line



Step 2: Sketch the cross section panel by connecting the borelines and tracing over the outcrop



Step 3: Make sure to reach the panel dividers on the left and right edges of the cross section



Step 4: Finish the sketch

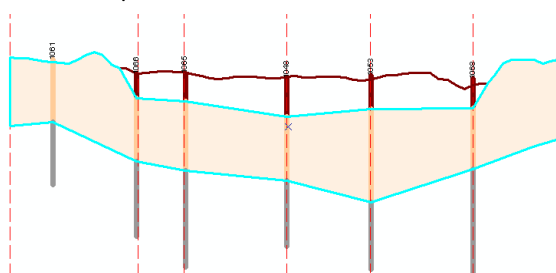

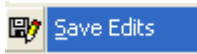


Figure 2 Steps in sketching a cross section panel.

9. Use the *Edit* tool  in the editor to select the feature you just created, Right Click, and select the Attributes option. Edit the following attributes, similar to Figure 3:

- Enter a value of 2 into the HGUID attribute so it matches the HGUID of the borelines and outcrops used in the sketching process.
- Set the SectionID attribute to be equal to the HydroID of the section line (**SectionID = 1**).

10. After editing the attributes, close the attributes window, and save the edits by selecting the *Save Edits* option in the *Editor* menu .

Property	Value
OBJECTID	2
Shape_Length	15511.897
Shape_Area	5577722.705
HydroID	<Null>
HydroCode	<Null>
HGUID	2
HGUCODE	<Null>
FType	<Null>
SectionID	1
HorizonID	<Null>

Figure 3 Editing attributes of new cross section features.

Next, you will digitize the panel for HGUID = 1:

11. Zoom in to the outcrop line representing HGUID = 1.
12. Select the *Auto Complete Polygon* task in the editor, as shown in Figure 4.

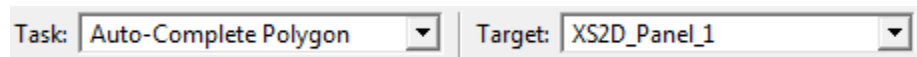



Figure 4 Setting the Auto Complete Polygon Task in the Editor.

13. Select the outcrop line and use the *Trace* tool  to sketch a line following the outcrop representing HGUID = 1.
14. Make sure that the line snaps to the end of the panel representing unit 2, as shown in Figure 5.

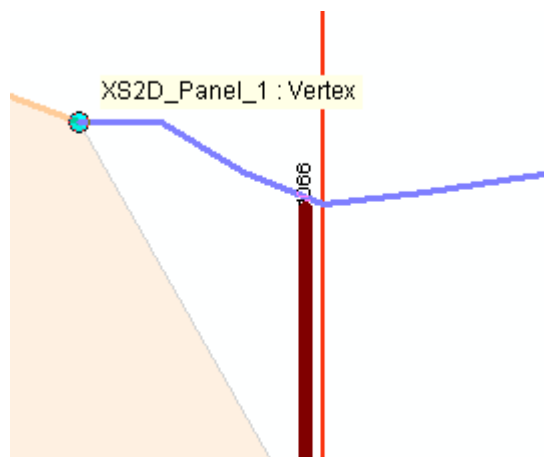


Figure 5 The new polygon should snap to the vertex located at the intersection of the cross section panel and outcrop.

15. Right Click and select *Finish Sketch*. A new polygon representing HGUID = 1 should be created. The polygon's boundary should match the boundary of the polygon representing HGUID = 2.

Your sketch should be similar to the one shown in Figure 6.

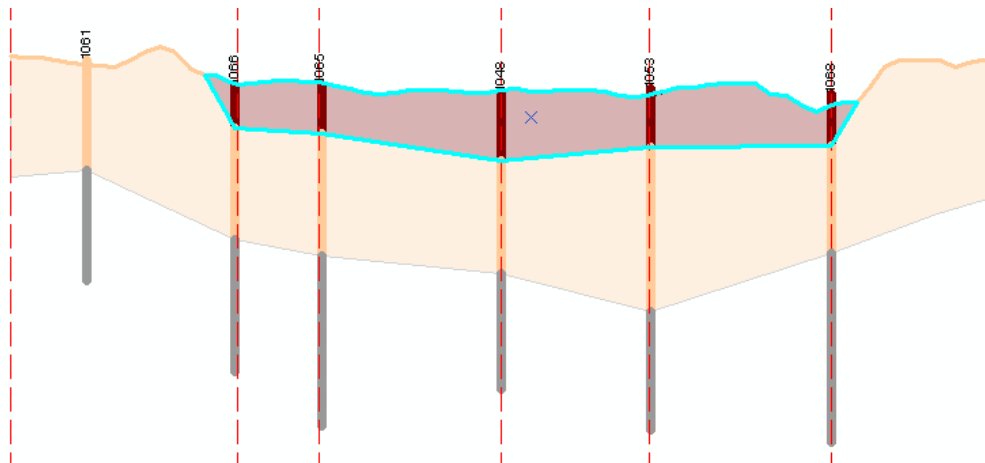
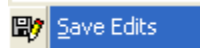


Figure 6 Cross section panel created using the Auto Complete Polygon task.



16. Use the *Edit* tool in the editor to select the feature you just created, Right Click, and select the Attributes option. Edit the following attributes:
 - Enter a value of 1 into the HGUID attribute so it matches the HGUID of the borelines and outcrops used in the sketching process.
 - Set the SectionID attribute to be equal to the HydroID of the section line (*SectionID = 1*).

17. Save the edits by selecting the *Save Edits* option in the *Editor* menu



Next, you will sketch the bottom unit (HGUID = 3).

18. Make sure the Auto Complete Polygon option is selected.
19. Start by selecting a vertex at the bottom left or right of the XS2D Panel representing unit 2. Sketch down and then across using the borelines as a guide to sketch the bottom of unit 3. Your sketch should be similar to the one shown in Figure 7.

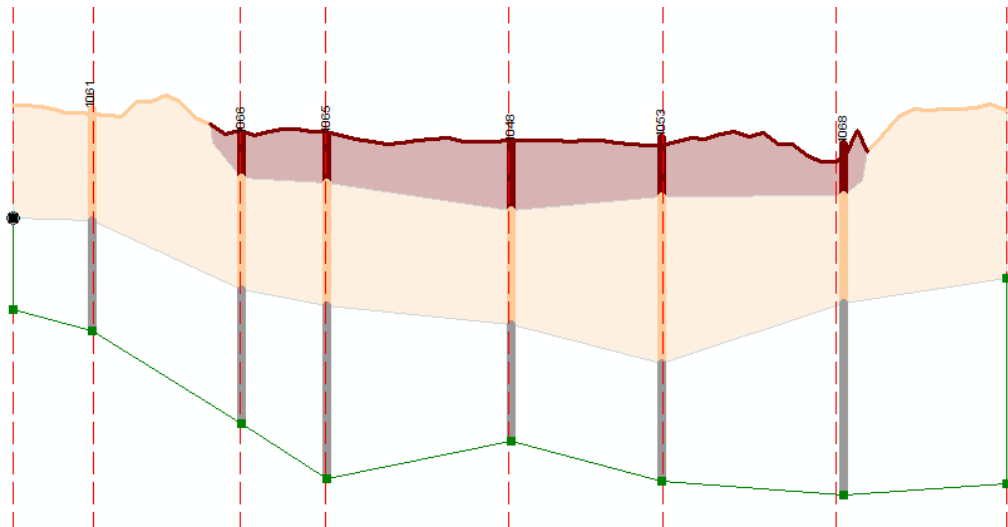


Figure 7 Sketching cross section panel for unit 3.

20. Once you finish the bottom and sides of the unit you can use the *Finish Sketch* command to automatically finish the sketch. Your sketch should be similar to the one shown in Figure 8.



21. Use the *Edit* tool in the editor to select the feature you just created, Right Click, and select the Attributes option. Edit the following attributes:
- Enter a value of 3 into the HGUID attribute so it matches the HGUID of the borelines and outcrops used in the sketching process.
 - Set the SectionID attribute to be equal to the HydroID of the section line (*SectionID = 1*).

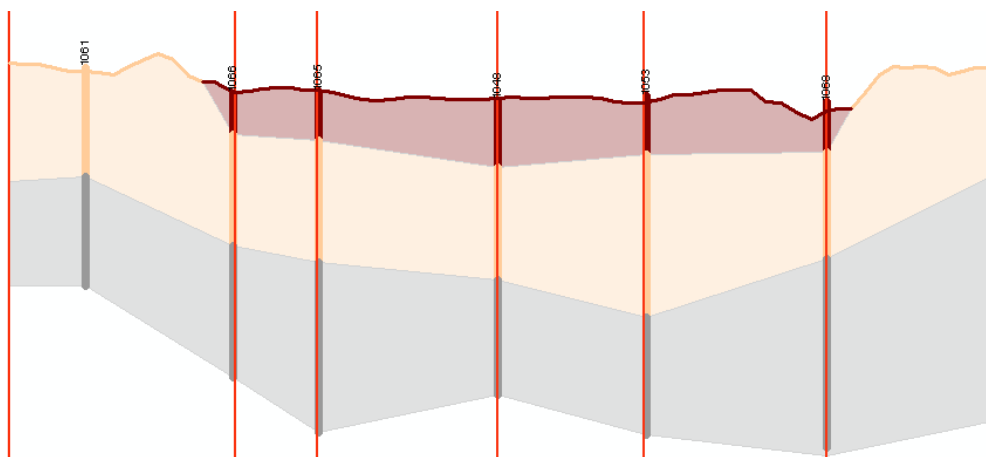


Figure 8 Cross section panel for unit HGUID = 3.