

Use the New 2D/3D Workflow features in Target for ArcGIS

In Target for ArcGIS version 3.5, there are three new interconnected features that make integrating 2D and 3D data in plan and section maps easier. These three new features enable you to:

- Display layers from a plan or section map in the Geosoft 3D Viewer.
- Export Features from Target plan or section maps as 3D shapefiles or 3D DXF files.
- Extract and plot a "slice" from a 3D vector file to a plan or section map.

Display Layers in Geosoft 3D View

With a single click you can now send any plan or section map layer to the Geosoft 3D Viewer. This enables you to quickly show drillhole data as well as any interpretation drawn on sections within the 3D Viewer.

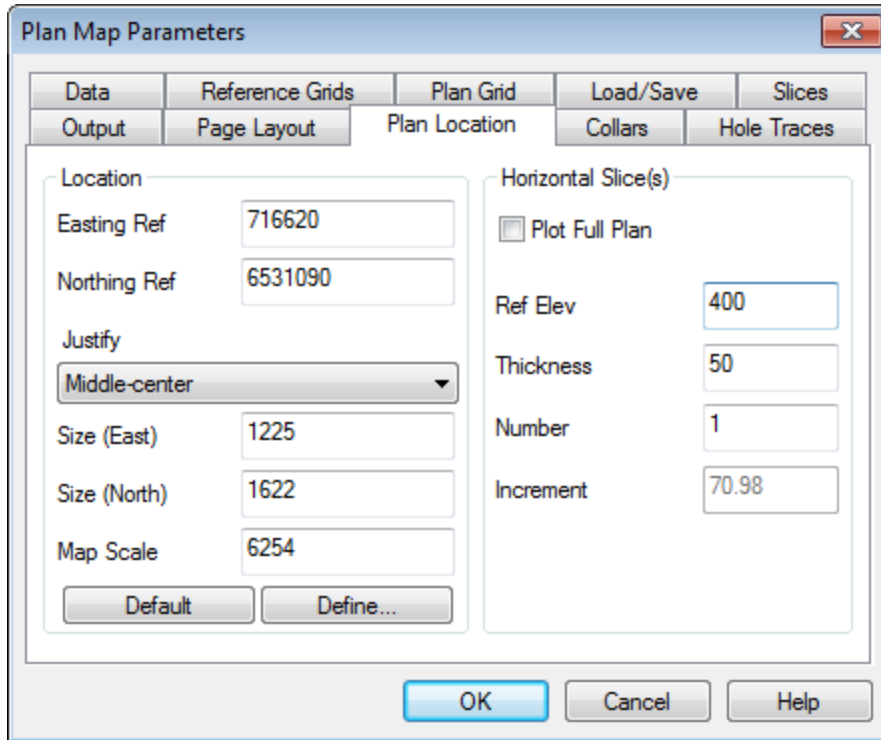
Map layers contained in a Target for ArcGIS data frame can be displayed in the Geosoft 3D Viewer. This includes any layers created as output from the Plan or Section Parameters dialog box, as well as interpretations drawn on section or plan maps. The selected group(s) will automatically display in the correct geospatial orientation in the Geosoft 3D Viewer. This tool allows you to easily compare data from section or plan maps with other datasets in the 3D Viewer.

To display layers in the Geosoft 3D Viewer

1. From the *Target Drillhole* toolbar, use **Generate Target Plan Plot**, **Generate Target Section Plot** or **Generate Target Stacked Section Plot** to create a map.



For Plan maps, deselect *Plot Full Plan* on the **Plan Location** tab and specify the *Ref Elev* and *Thickness* for the map. For more information about these parameters, click the **Help** button on the **Plan Location** tab.

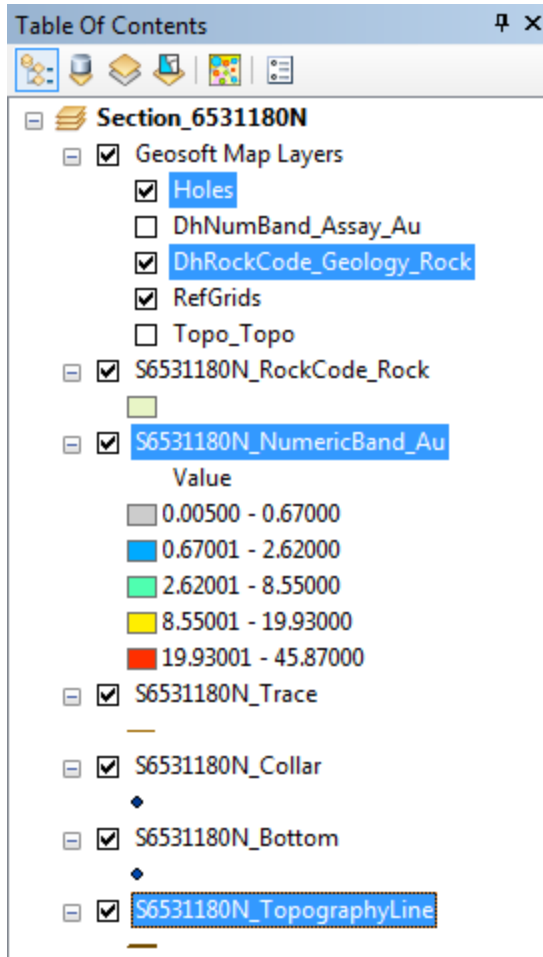


For Stacked Sections, select the **Output** tab on the *Section Parameters* dialog and ensure *Load to separate data frame(s)* is selected.

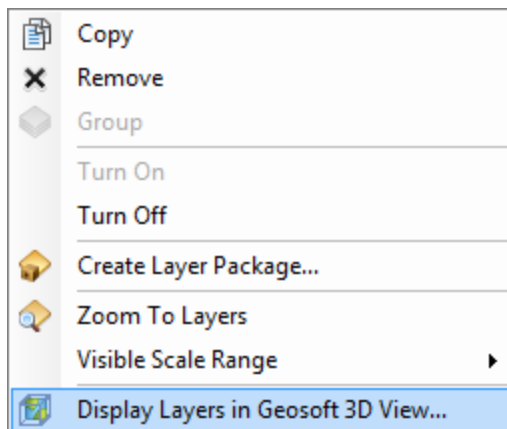
2. In the *Table of Contents* window, select the layer(s) to display in the 3D Viewer.



*You can select multiple layers using the Shift or Ctrl keys.
Both Geosoft Map Layers and shapefile can be selected.*



- Right-click the layer selections in the *Table of Contents* window and from the popup menu, select **Display Layers in Geosoft 3D View**.



The selected layers will display in the Geosoft 3D Viewer. If you have more than one 3D View in the MXD and would like to display the layers in a particular one, be sure to select the 3D View of interest in the Layout view after closing the 3D Viewer but before displaying the layers.

Export 3D Features from Target Map

Drillhole information is 3D but ArcMap is a 2D mapping environment designed for efficient plan map viewing. Target for ArcGIS adjusts the data frame coordinate system to enable 3D drillhole data to be plotted properly.

In Target for ArcGIS v3.5, shapefiles created as output from the Plan or Section Parameters dialog, as well as interpretations drawn on any data frame created by Target for ArcGIS, can now be exported to fully georeferenced 3D shapefiles or 3D DXF files. The output 3D shapefile or 3D DXF captures and stores the real world coordinates enabling the features to be shared and visualized in 3D. These output 3D files can be opened in the Geosoft 3D Viewer, Esri's ArcScene, and other 3D applications.

To draw an interpretation on a Target for ArcGIS data frame

1. Switch to *Data View* if you are in *Layout View*.
2. From the *Draw* toolbar, select a **graphic** to add (i.e. Polygon, Line, Curve, etc...).
3. Draw the interpretation on the section or plan map.

To convert graphics to features

1. In the *Table of Contents*, right-click the data frame containing the graphics you want to convert to features and from the popup menu, select **Convert Graphics To Features**.

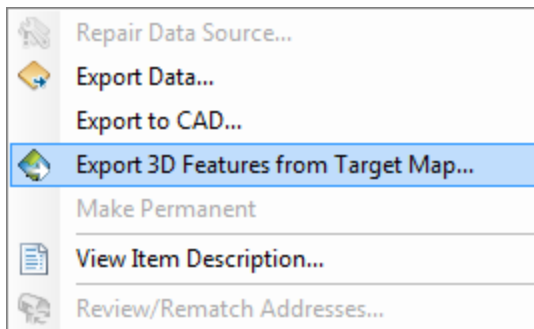


*You can also select the Drawing menu on the Draw toolbar and select **Convert Graphics To Features**.*

2. For Output shapefile or feature class, browse to your project folder and enter a name for the shapefile (*.shp).

To export a 2D shapefile from a plan or section map to a 3D file

1. In the *Table of Contents*, right-click the layer to export.
2. Hover your mouse over *Data* and from the popup menu, select **Export 3D Features from Target Map**.



3. The *Export 3D Features from Target Map* dialog appears.
4. Click **Browse** to the right of *Output file name*.



You can change the File name here if you wish.

5. From the *Save as type* dropdown list, select *ArcView Shape (*.shp)* or *DXF Files (*.dxf)* and click **Save**.
6. Click **OK** on the *Export 3D Features from Target Map* dialog.



You can optionally display the exported 3D File in the Geosoft 3D Viewer or in ArcScene, (if you are licensed for that product).

Plot 3D vector file slice

You can now import 3D shapefiles and 3D DXF files while generating section and plan maps in Target for ArcGIS. This enables you to add 3D vector files (such as ore body wire frames and open pit outlines from mine planning packages) to section and plan maps. The imported 3D files appear in the correct location on your 2D map. The 3D DXF file is clipped to the thickness and orientation of the section or plan map (only the portion which exists inside the map is visible) while the entire 3D shapefile is projected onto the centre slice of the map.

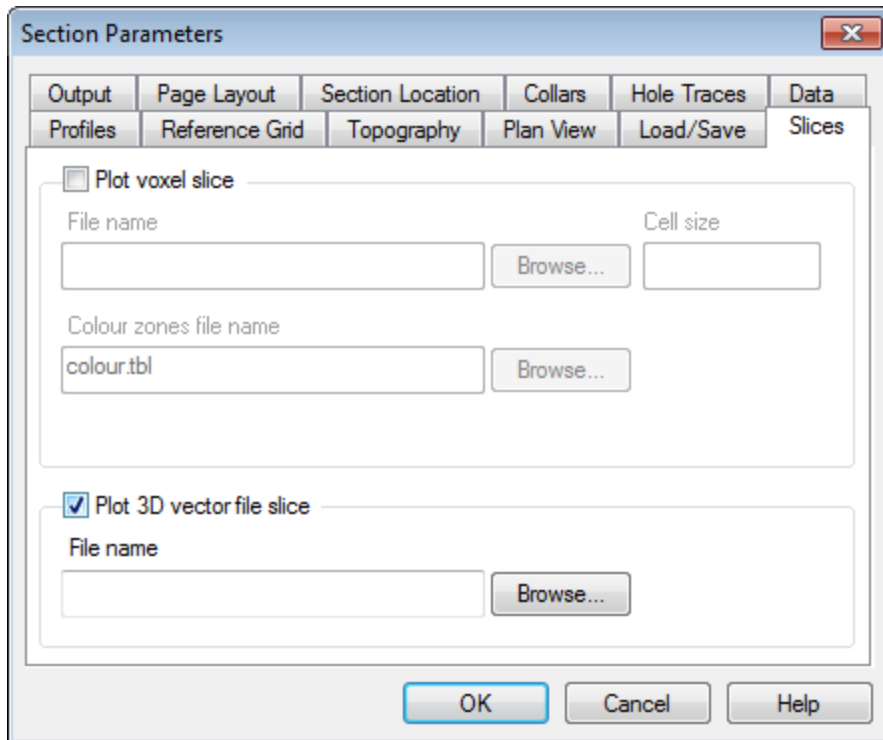
To plot a 3D vector file slice

1. From the *Target Drillhole* toolbar, click **Generate Target Plan Plot**, **Generate Target Section Plot** or **Generate Target Stacked Section Plot**.
2. Select the **Slices** tab on the *Map Parameters* dialog box.



This tab can also be used to plot a voxel slice (i.e. a section grid extracted from a voxel).

3. Select **Plot 3D vector file slice**.



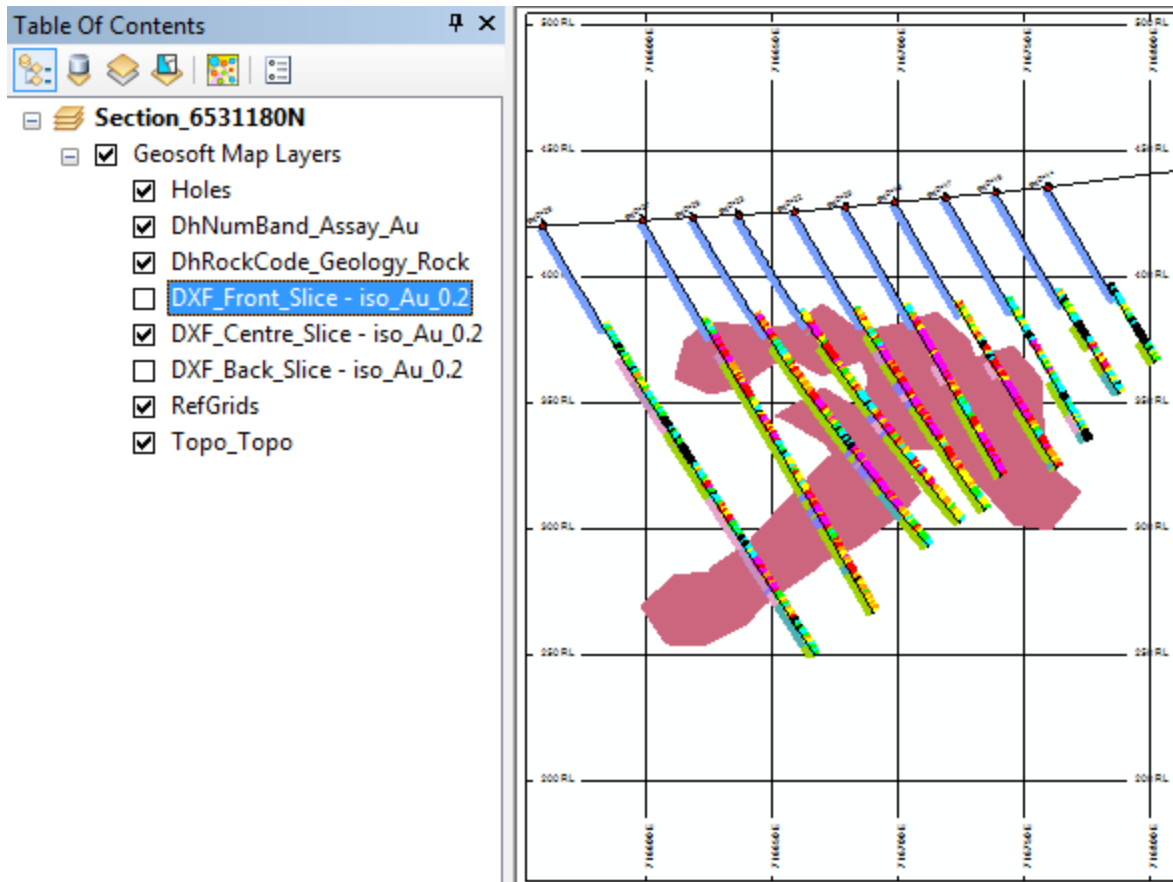
4. Select the **Browse** button.
5. Select the *3D DXF* to slice and select **Open**.
6. Set the parameters in the remaining tabs as required.

For Plan maps, uncheck *Plot Full Plan* on the **Plan Location** tab and specify the *Ref Elev* and *Thickness* for the map.

7. Click **OK** to create the map.

For section maps, DXFs are sliced along the front, centre and back of the section window, (if the 3D file intersects along those planes). For plan maps, DXFs are sliced along the top, centre and bottom of the plan thickness (if the 3D file intersects along those planes). The output layers will inherit the same colour as the DXF file. For shapefiles, the entire file is projected onto the centre slice of the map.

8. You can optionally drag layers up or down in the *Table Of Contents* to change the drawing order of the Geosoft Map Layers.



If the slice plane intersects a body at a location where it is closed, a filled polygon is added to the map. On the other hand, if the slice plane intersects the body at a location where it is open, a polyline without fill is added to the map.

The three new interconnected features in Target for ArcGIS 3.5 provide improved 2D to 3D interoperability, enabling you to:

- Move more easily from 2D section and plan maps to the 3D environment.
- View your 2D interpretations in 3D.
- Collaborate and share 3D features with other users.

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