

## 3D Visualization of Contours and Orthophotos in ArcScene 9

These procedures build on files produced from DTM data using the procedure guide “Generating contours from a Digital Terrain Model (DTM).”

### Viewing Contour Layers in 3-Dimensions:

**Step 1** – Launch ArcScene by clicking **Start – Programs – ArcGIS – ArcScene**.  
**Step 2** – Add a raster image containing elevation values to the **Scene Layers** by clicking the ‘Plus Sign’ circled in Figure 1 below. Navigate to the desired file and click on it. Also add the contour line shapefile associated with the raster image so the two files overlay.

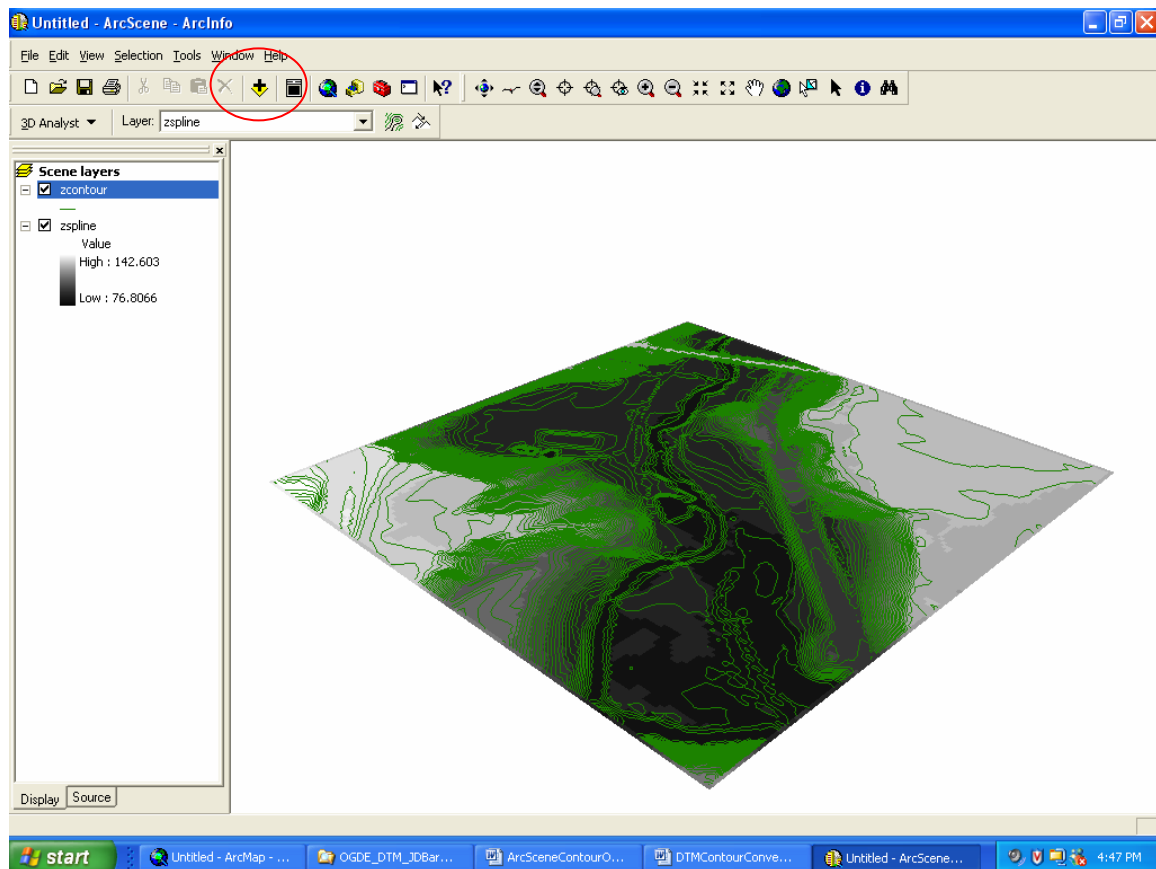


Figure 1

**Step 3 – Convert Contour Features to 3D:**

Open the 'Convert Features to 3D' box by clicking on the '**3D Analyst**' tab – **Convert – Features to 3D** as illustrated in Figure 2 below.

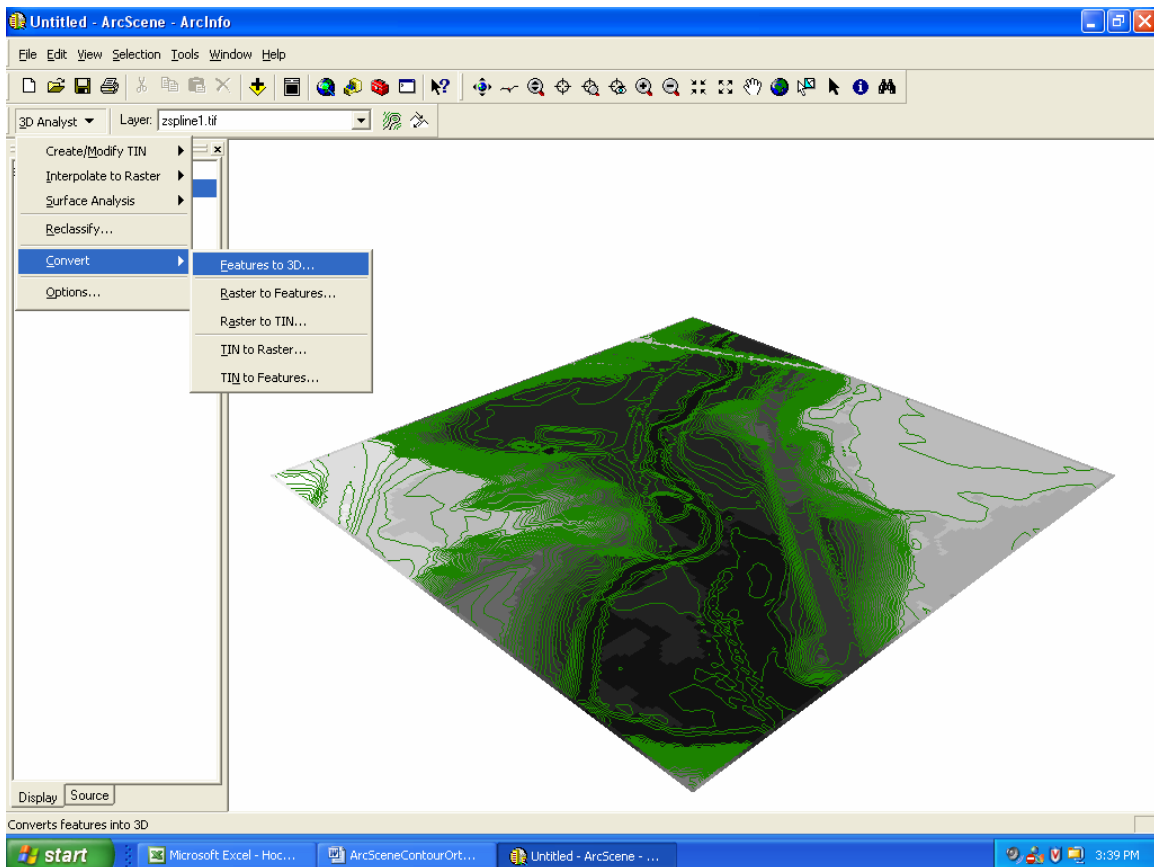


Figure 2

**Step 4** – With the ‘**Convert Features to 3D**’ box open (Figure 3), select the contour file under the Scene Layers heading as the ‘Input Feature’ and the raster containing elevation values as the Source of heights/Raster or TIN surface, by clicking the corresponding radio button. Map a destination and name the Output feature to be created. Click **OK**.

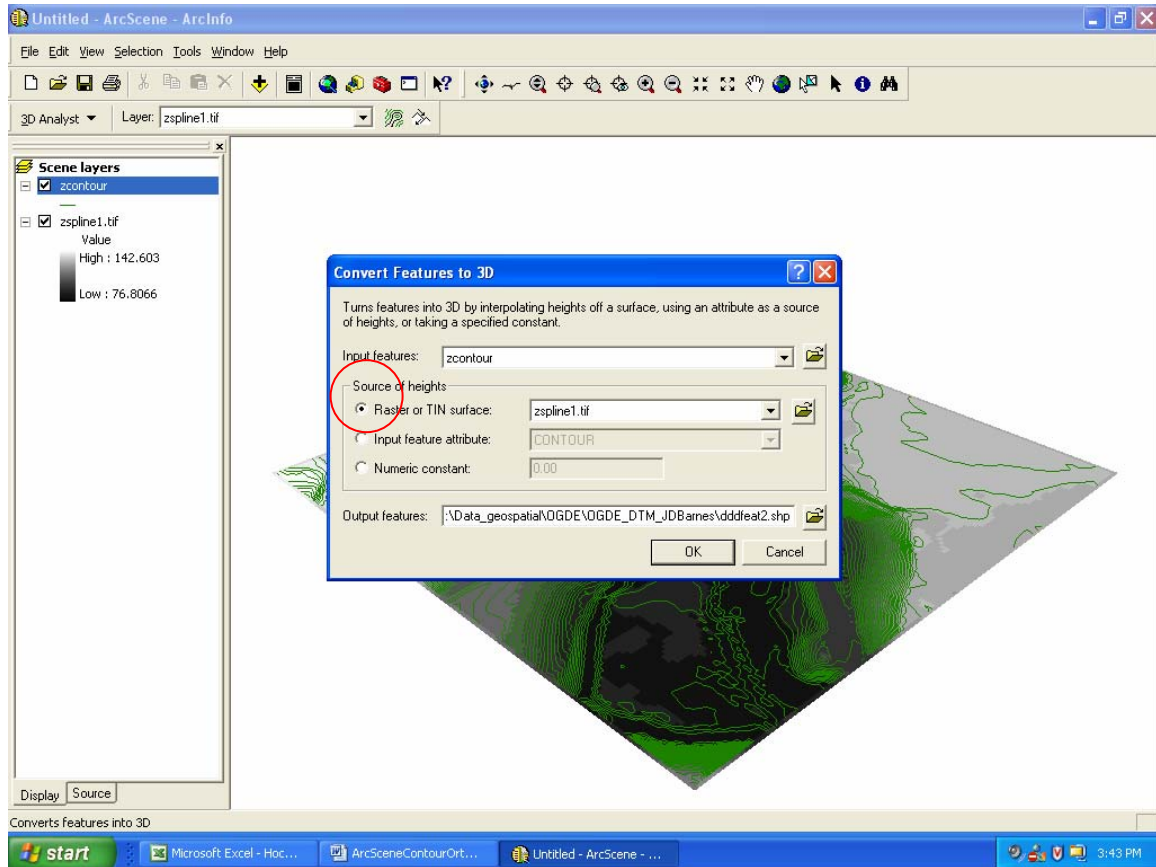


Figure 3

If created successfully, the 3D Contour surface should resemble Figure 4 below.

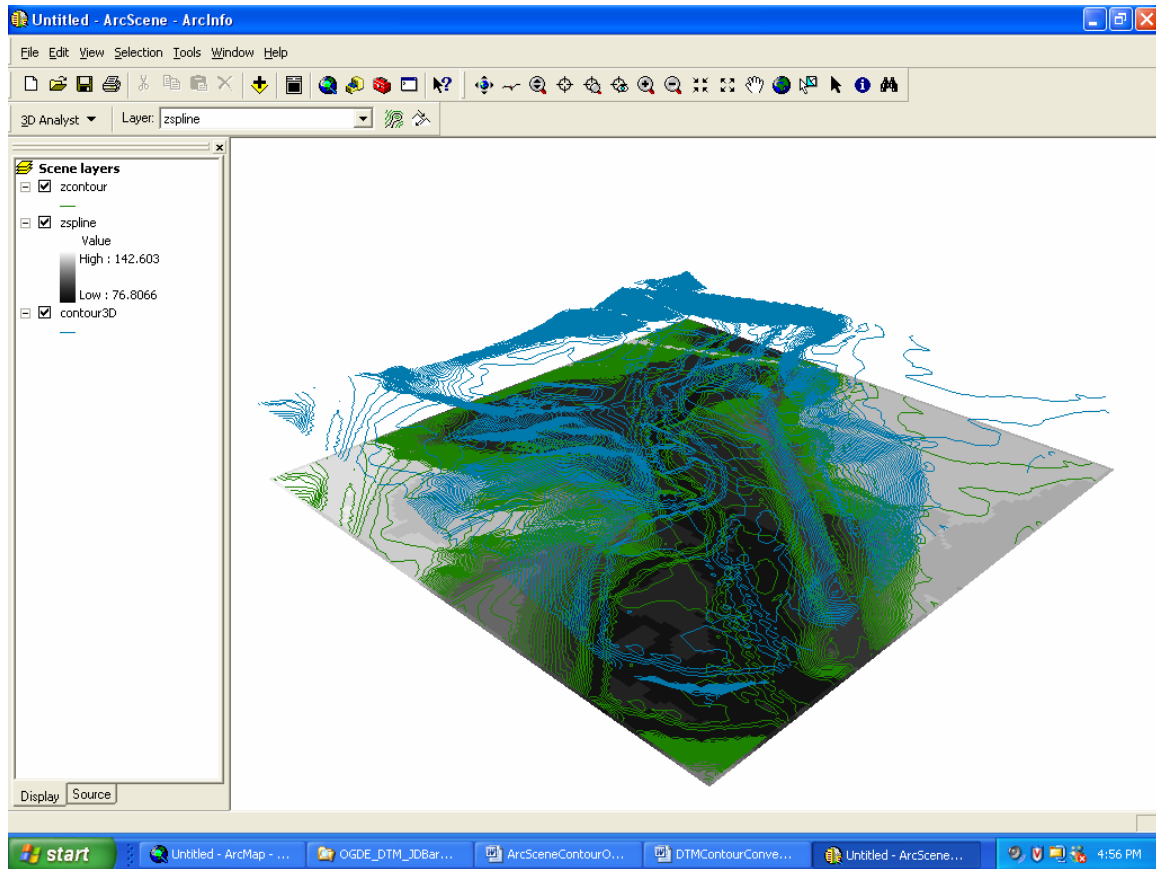


Figure 4

## Viewing Orthophoto Layers in 3-Dimensions:

**Step 1** – Launch ArcScene by clicking **Start – Programs – ArcGIS – ArcScene**.  
**Step 2** – Add a raster image containing elevation values to the ArcScene Layers by clicking the ‘Plus Sign’ circled in Figure 1 below. Then navigate to the desired file and click on it. Also add the orthophoto associated with the raster image so the two files overlay.

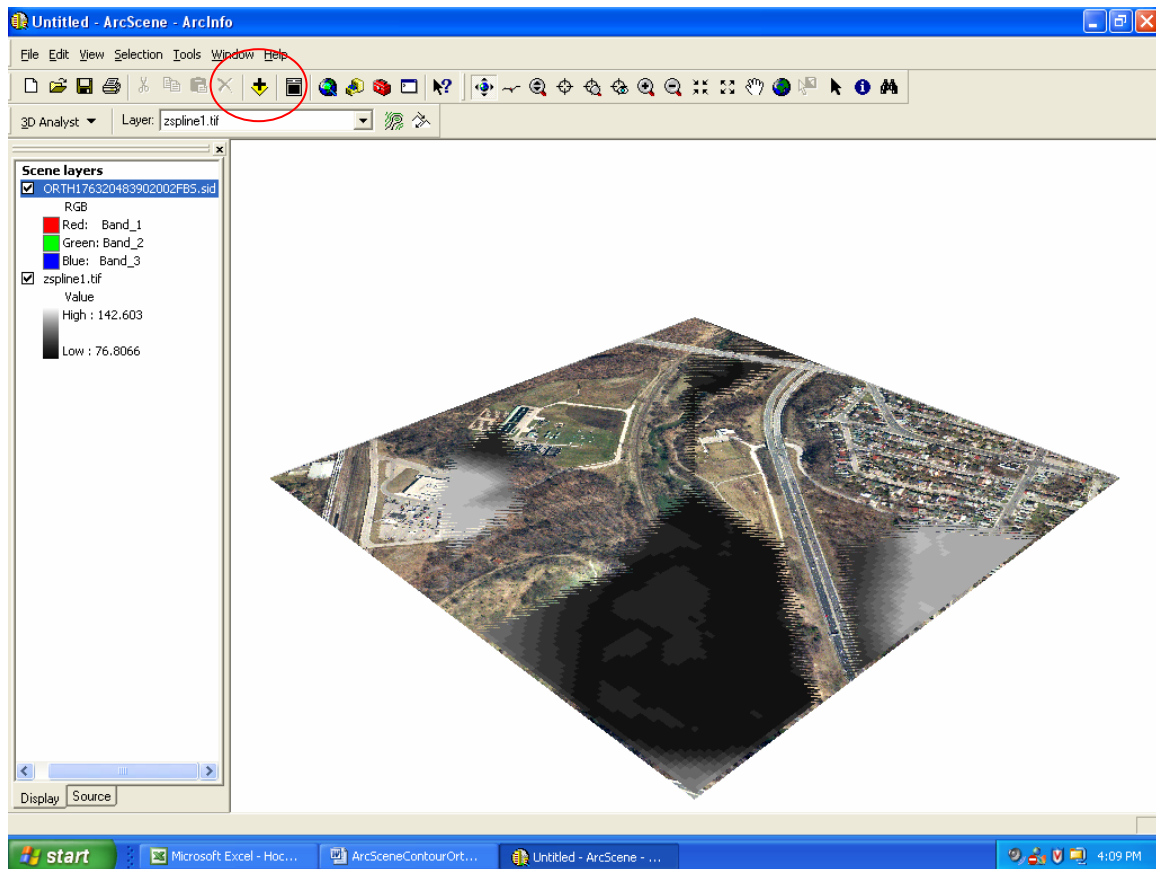


Figure 1

### Step 3 – Convert Orthophoto Features to 3D:

To open the **'Layer Properties'** box, right-click on the orthophoto under the Scene Layers heading, and scroll down to **'Properties'** as illustrated in Figure 2 below.

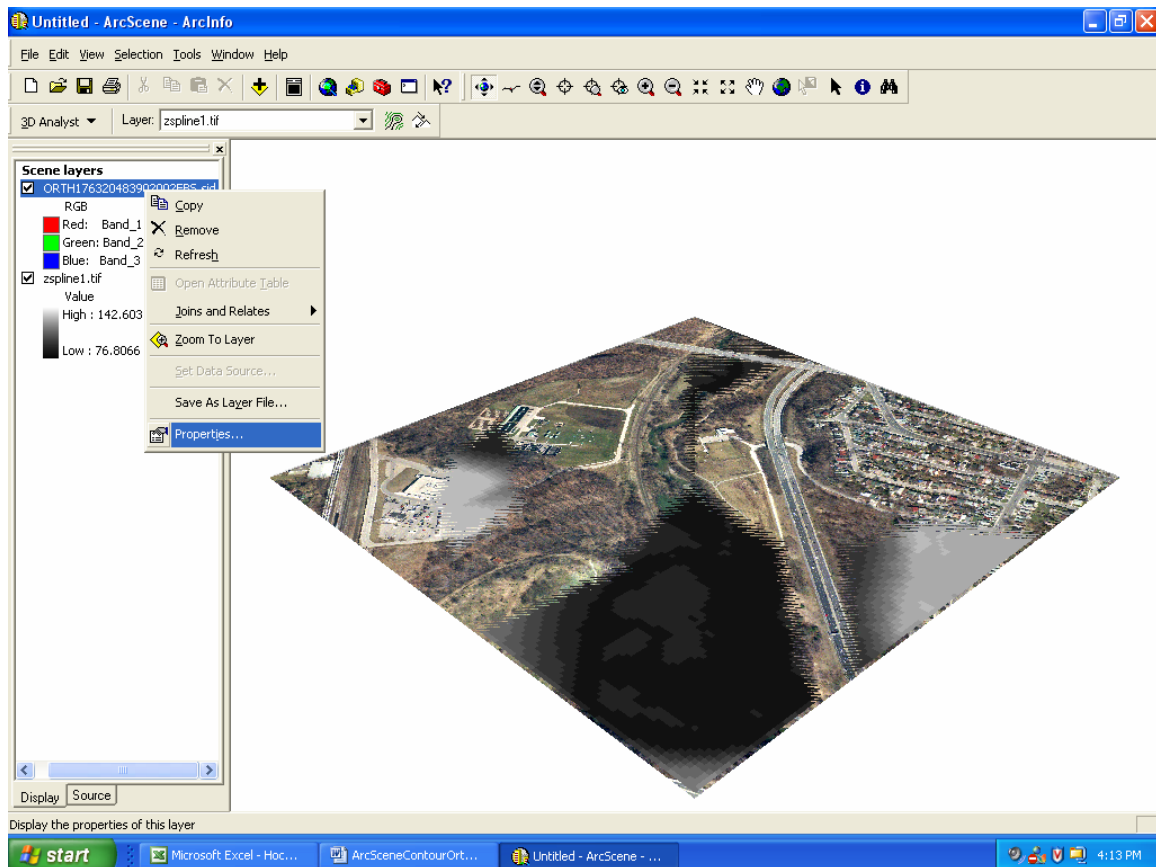


Figure 2

**Step 4** – With the ‘**Layer Properties**’ box open (Figure 3), click the radio button beside the ‘Obtain heights for layer from surface’ box circled below. Browse to the raster containing elevation values located under the ‘Scene layers’ heading. Click **OK** to view the orthophoto in 3D.

**Note:** For this operation to work successfully, both the orthophoto and the raster containing elevation values **MUST** be loaded under the ‘Scene layers’ heading.

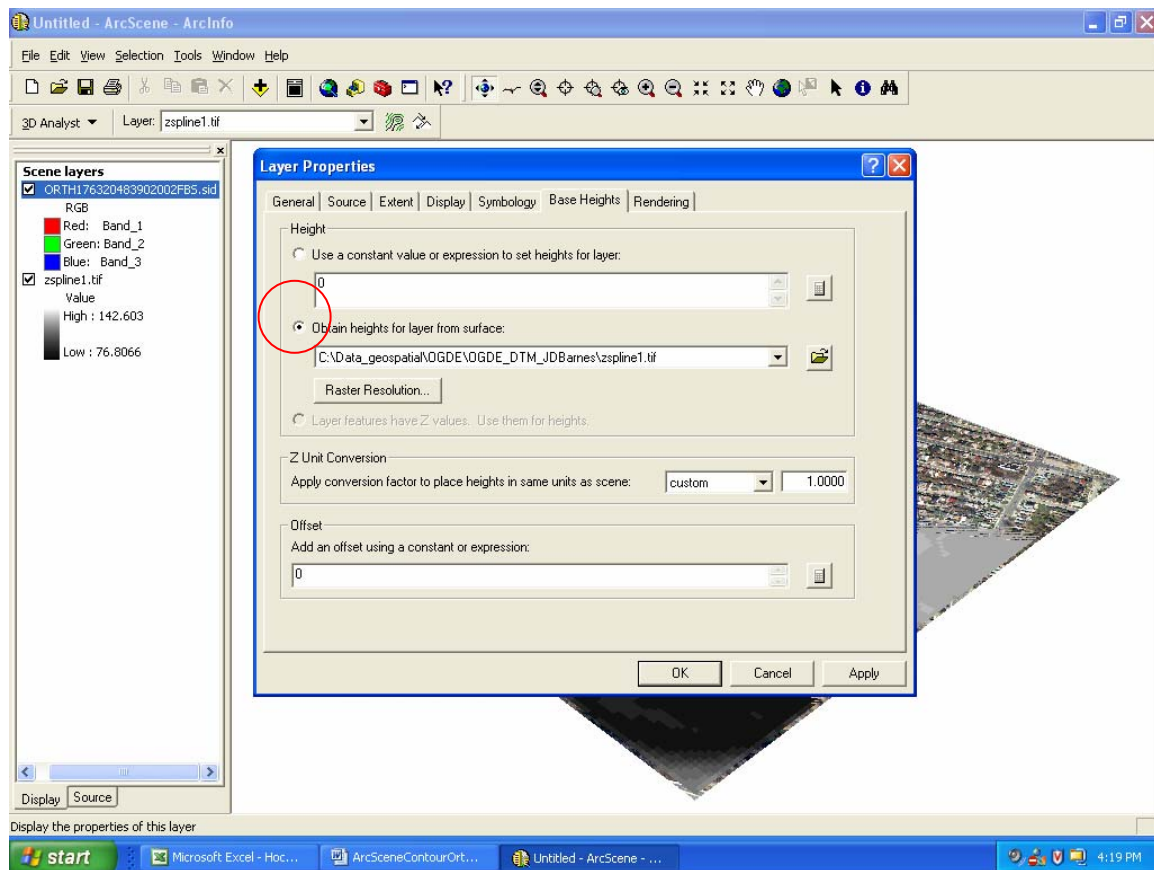


Figure 3



If created successfully, the 3D Orthophoto surface should resemble Figure 4 below.

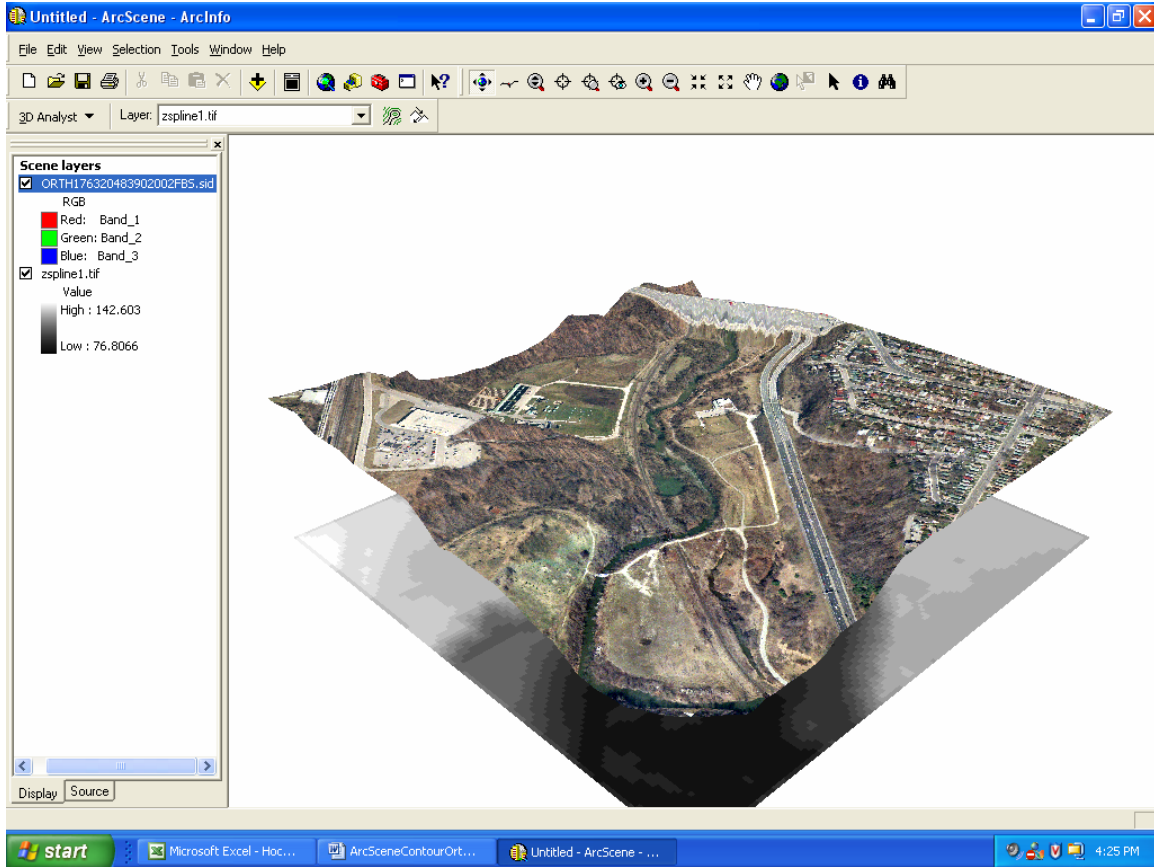


Figure 4



**Step 5:** Optionally, add the 3D Contour Features to the newly created orthophoto as illustrated in Figure 5 below. Use the various ArcScene Tools circled in red to maneuver the 3D image.

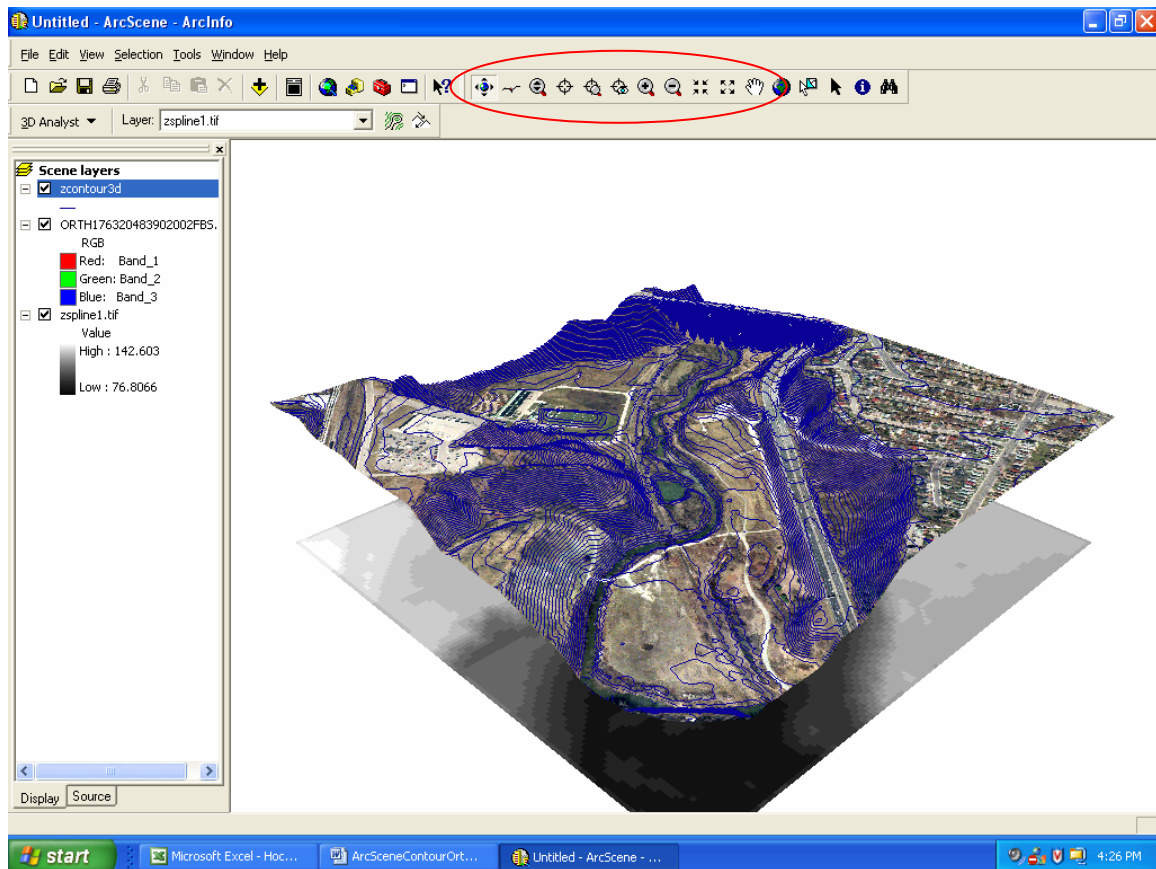


Figure 5

