



Using Geometry Objects in Legend Objects

In MineSight® 3-D v3.30-00, a new option was added to legend objects that allows you to use geometry objects. In addition to using either a Company Logo, a Cutoff Table, a Drillhole View, or a Model View, you can use an existing geometry object in a legend for plotting. This new option is particularly useful for showing how various geometry objects are displayed, such as node symbols, lines types, or polygon fill colors and patterns. For example, a Geologic Explanation that describes rock types and other geologic map symbols (such as faults), is something that could be set up once in a project, then used again in many different plots.

To use a geometry object in a legend object, the geometry object must be in plan. All elements to be displayed must be in one geometry object and only one geometry object can be selected for use in a Legend object. Individual elements in the geometry object can (and probably should) be attributed differently to enhance their appearance (e.g. use different fill patterns, colors, fonts, and font size, etc). In the example shown in Fig. 1, there are several different elements contained within one geometry object called **geol explanation** and the individual elements are each attributed differently to show a different fill pattern, color, font style, and size.

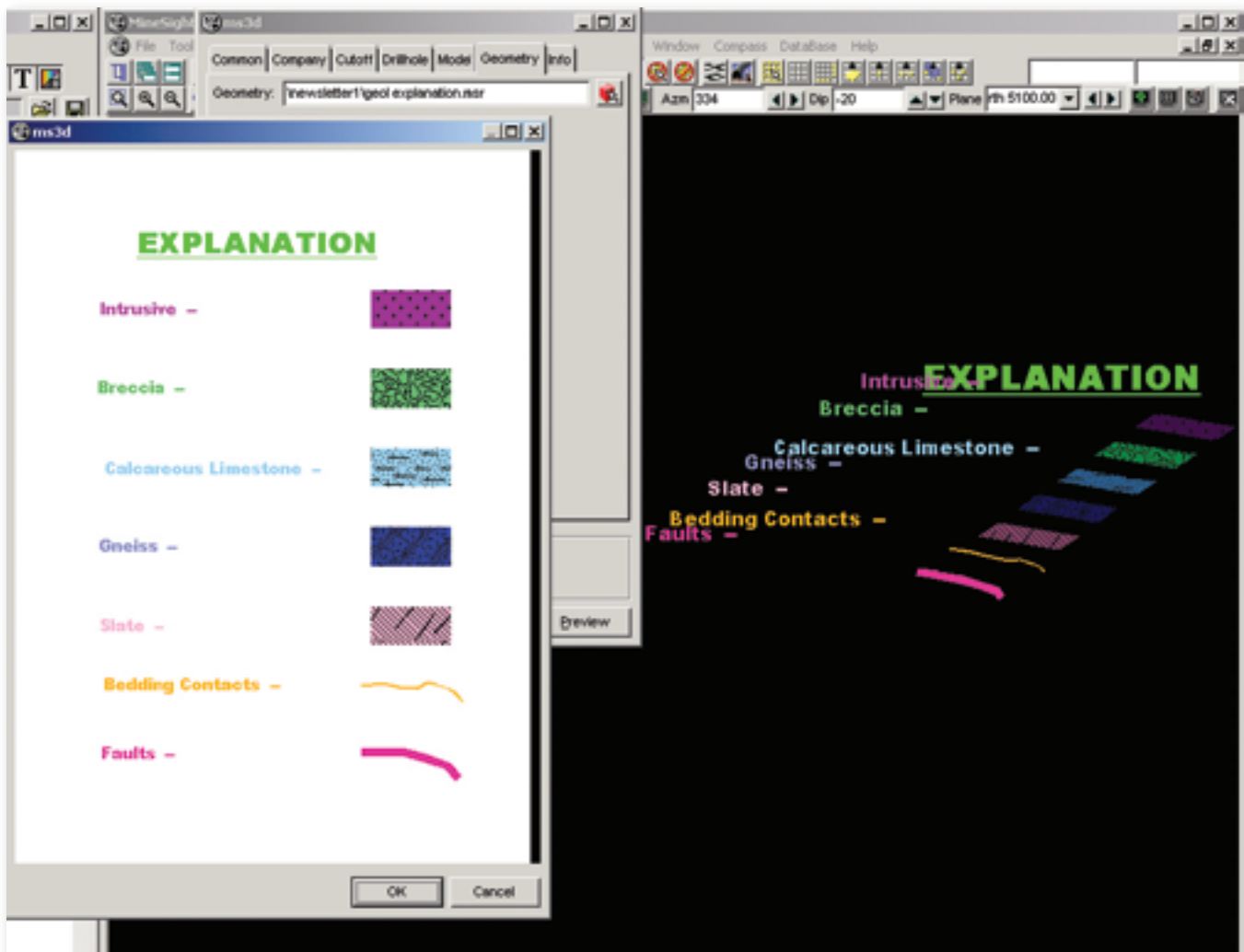

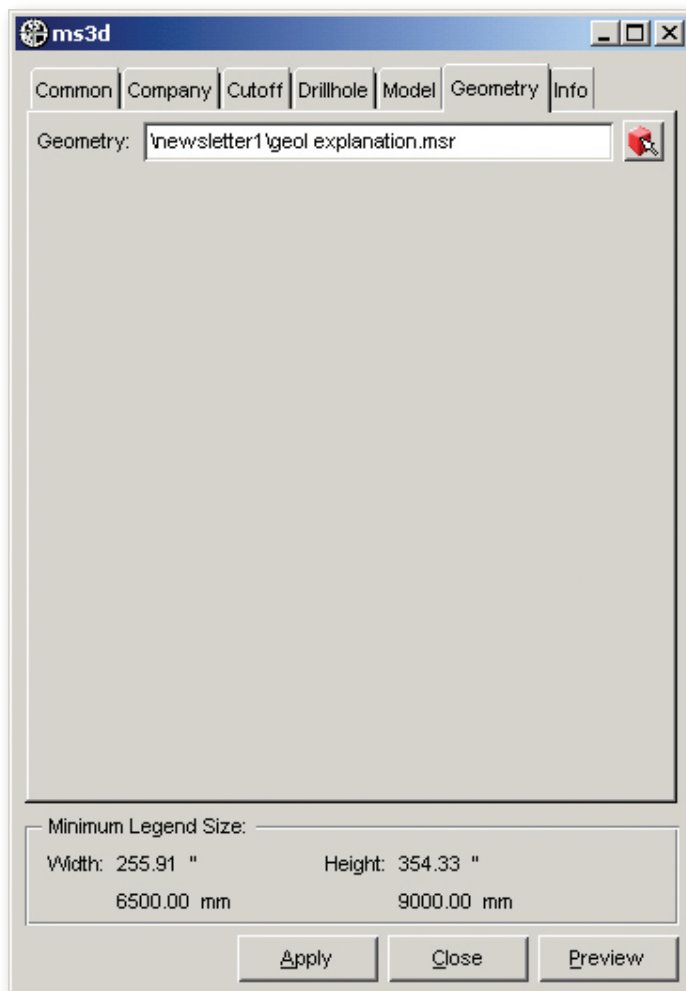
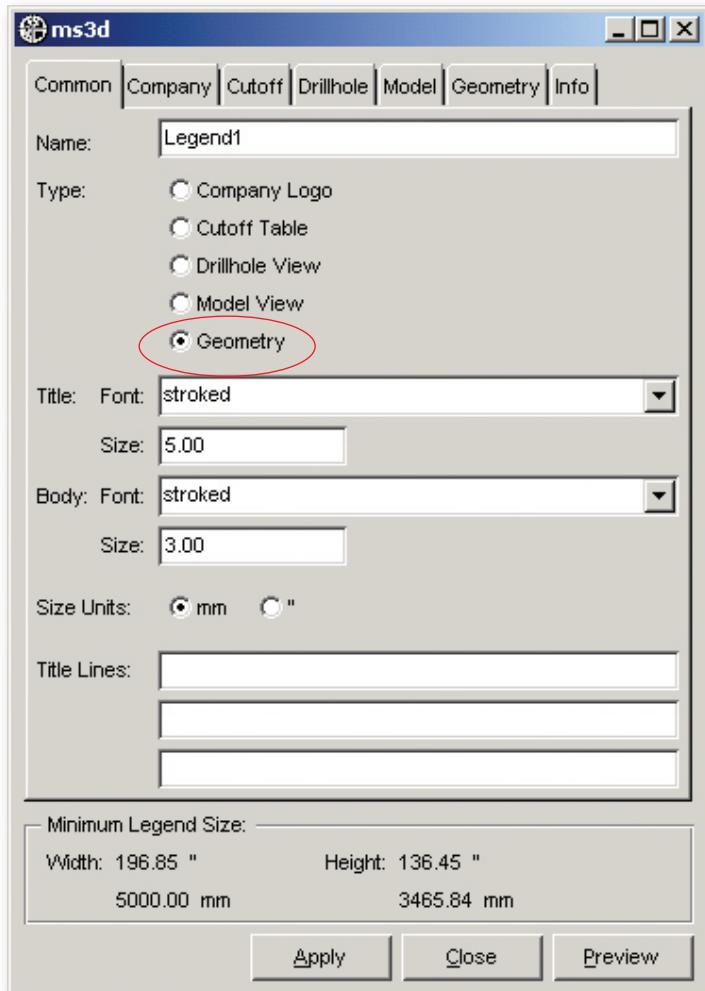


Fig. 1. Shows the geometry object, **geol explanation**, which consists of several different elements, as displayed in the viewer, and in a **Preview** window from the **Legend Object** dialog. The elements are shown at an angle in the viewer to illustrate that all of the elements in this geometry object lie on the same horizontal plane. In this example, non-transformed labels were used (note they always face forward), but semi-transformed or transformed labels could have just as easily been used.

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To use a geometry object in a legend object, first create a new legend object, then select **Geometry** from the **Common** tab dialog (Fig. 2a). Next, go to the **Geometry** tab dialog page and using the geometry icon,  browse to find the desired geometry object you wish to use in the Legend object (Fig. 2b). Use the **Preview** button to verify your selection.



Figs. 2a and 2b. The **Legend Tool** dialog showing both the **Common** tab and the **Geometry** tab dialogs. First select the **Geometry** option on the **Common** tab, then go to the **Geometry** tab and select the geometry.

The **Legend Tool** will load the geometry object in order to display it in the legend. Therefore, if the geometry object you have selected to use in the legend object is closed, it will be opened automatically.

The geometry object used in the legend object should probably be created or placed in an area of the project that is very far away from your actual real data to prevent it from being displayed as part of the viewer plot area.

Finally, place the legend object in the plot layout and preview the plot (Fig. 3). When it comes to placing the legend object in your plot and if you'll be dealing with changing paper sizes, we recommend that you use the top and left area configuration struts in the **Plot Layout** editor and set them to cm/", rather than %. The object properties show the size and should be used in the plot. The **width** and **height** buttons should be set to cm/"" and set to match the legend size (after previewing, some minor adjustments may be required). The legend will now be scale independent.

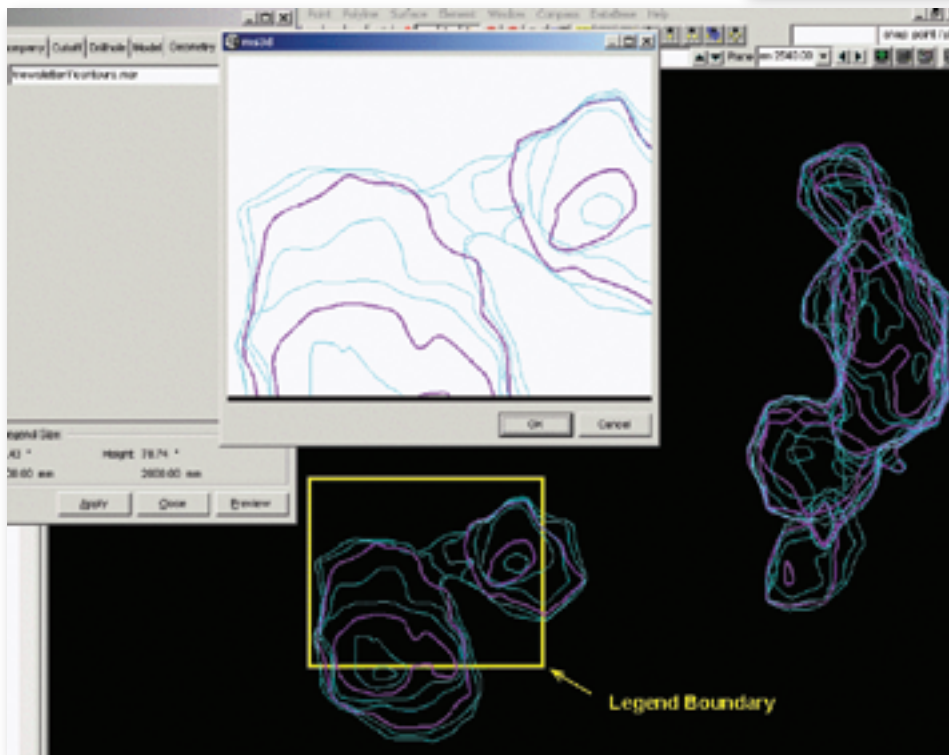
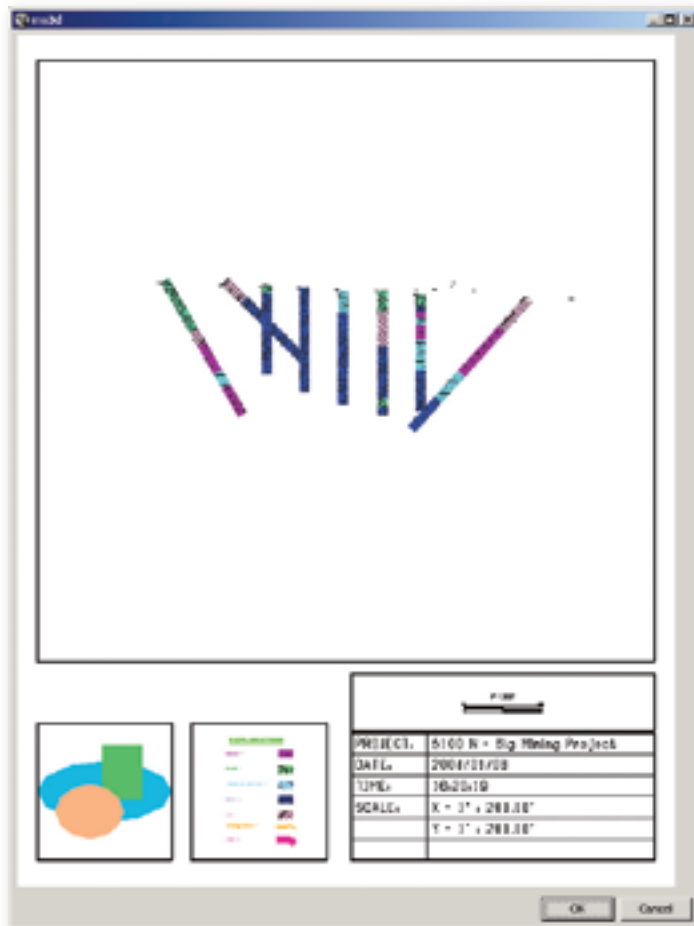
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Fig. 3. (To the right) This figure is a preview of a drillhole cross section plot showing the legend object that contains the geometry object, **geol explanation**, as well as other plot elements (scale bar, title block, and another legend object).

You can specify a boundary by attributing a rectangular polygon with the material type **Legend Boundary**. The boundary must be an element within the geometry object, but attributed with the material type **Legend Boundary**. Objects and/or elements attributed with this material type are not visible in the viewer because their visibility is turned off in the material's properties.

Fig. 4. (Below) This figure shows a plan view of the selected geometry object with many elements (contour polygons), one of which is the **Legend Boundary**, as shown in the yellow rectangle for display purposes. The **Legend Preview** window at the top illustrates how only the geometry inside the **Legend Boundary** is used.



The advantage to using a boundary is that it can be smaller than the rest of the geometry. This allows the geometry in the Legend to spill out of the box and properly fill up the legend area. This is useful if the plot area for the legend does not match 1:1 with the aspect ratio of the Legend contents. Conversely, making the **Legend Boundary** larger than the data allows you to add space around your legend object thus adding some placement control within the Legend itself.

There are many tricks you can use to place or make your Legends more aesthetically pleasing, such as using the scalable cursor in conjunction with a planar square and element copy to perfectly align newly created nodes. You can also create different material types setting the

fonts, sizes, colors, etc. differently for each material and then use those different materials when attributing the various elements in the geometry object. Remember that the data must exist in plan and if you use 3-D solids as the geometry object in the legend object, when plotted, the data elements will be displayed as flat objects without lights or hidden surfaces.

This very useful new option in the **Legend Tool** is available in MineSight® 3-D v3.30-00.