

## CADD NOTE 12

The purpose of this CADD Note is to provide instructions for generating the soil log annotations that are placed on a profile drawing. The profile should be a 2D polyline. The profile would normally be one generated from Eagle Point's RoadCalc module or the Profile module. The x-coordinate of the line is taken as the station. The y-coordinate is assumed to be the elevation times a stretch factor. The stretch factor is the horizontal scale divided by the vertical scale. For example, a horizontal scale of 100 and a vertical scale of 5 would result in a stretch factor of 20 ( $100/5 = 20$ ). Therefore, a y-coordinate of 2000 would convert to an elevation of 100 ( $2000/20 = 100$ ).

### USING THE SOIL LOGS COMMAND

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Before using this command, the current settings for text style should be set as desired. The annotations will be created using the current text style setting. The annotations will be placed on layer B.Soil.Bore. To use the soil logs command in AutoCAD, use one of the following methods:

MENU: **NRCS\_MO, Insert, Soil Logs...**

COMMAND: **soillogs**

Follow the steps below:

1. Before entering the command, you should create a text file using an editor capable of saving in a text (i.e., ASCII) format such as Notepad. See the "File Format" section in this note for instructions on what to enter in this file.
2. Enter the *SOILLOGS* command.
3. Select the file created in step 1.
4. The annotations will be created using the current coordinate system. See the sample shown later in this note.

# SOIL LOG ANNOTATION

## FILE FORMAT

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The file used to create the soil log annotations should be a text file. This file must be created outside of AutoCAD using any editor or word processor that can save as a text file. Notepad (Start, All Programs, Accessories, Notepad) is one example. Any line beginning with a semicolon ( ; ) is considered as a comment and ignored.

The file should contain the lines described below.

**HSCALE=**        These two lines specify the horizontal scale and vertical scales to use.  
**VSCALE=**        They are used in computing a stretch factor ( horizontal scale/vertical scale ).  
                  They should occur before the first *HOLE=* line.  
                  Examples: *HSCALE=100*  
                              *VSCALE=10*

If any of the following four lines occur before the first *HOLE=* line, they set a global variable which effects the whole file. If the line occurs after a *HOLE=* line, it pertains from that depth to the end of that hole only.

**TICKSIZE=**        This line sets the size of the small horizontal line (i.e., tick) which denotes the depth. A positive value places the line on the right of the vertical line. A negative value results in the line being on the left. The value entered should be the desired plotted size. The actual size in the drawing will be determined by multiplying the size entered here by the horizontal scale (e.g., *TICKSIZE=0.15* and *HSCALE=100* will result in a line 15 units long in the drawing).  
Example: *TICKSIZE=0.15*

**TEXTSIZE=**        This line sets the size of the annotation text. The value entered should be the desired plotted size. The actual size in the drawing will be determined by multiplying the size entered here by the horizontal scale (e.g., *TEXTSIZE=0.12* and *HSCALE=100* will result in text 12 units tall in the drawing).  
Example: *TEXTSIZE=0.12*

**TOPDEPTH=**        This line sets the depth (distance) of the vertical line above ground elevation. The length of the line drawn is determined by multiplying the value entered by the stretch factor. The hole description is placed above this line.  
Example: *TOPDEPTH=10*

**TICKBOT=**         If this is set to 0, no horizontal line will be drawn at the bottom of the vertical line. To override the 0 setting for one hole and force the line to be drawn, repeat the last depth with no description. If it is set to 1, a line will be drawn.  
Example: *TICKBOT=0*

## SOIL LOG ANNOTATION

The following lines define each hole. They should be entered in the order given here.

**HOLE=** This line starts the definition of a hole. The text that follows the = is used as a label and is placed above the vertical line.

Example: *HOLE=1800*

**sta,elev** The station and corresponding ground elevation are given on this line.

Example: *1800,788.3*

**depth,description** The depth (i.e., distance below ground elevation) and the desired text desired at that depth are entered here. Depths should be entered as positive values. This line is repeated for as many depths as desired. The lines should be entered in increasing depth order. The actual length of the vertical lines placed in the drawing are the depth value entered here times the stretch factor.

Examples: *0.5,Topsoil*  
*3.0,CL/CH*  
*5.0,CH*  
*17.0,SP*

The above three lines should be repeated for each hole.

# SOIL LOG ANNOTATION

## SAMPLE

Shown below is a sample file for generating soil log annotations. It is shown here as three columns for sake of space. Each column actually follows the previous column in the file.

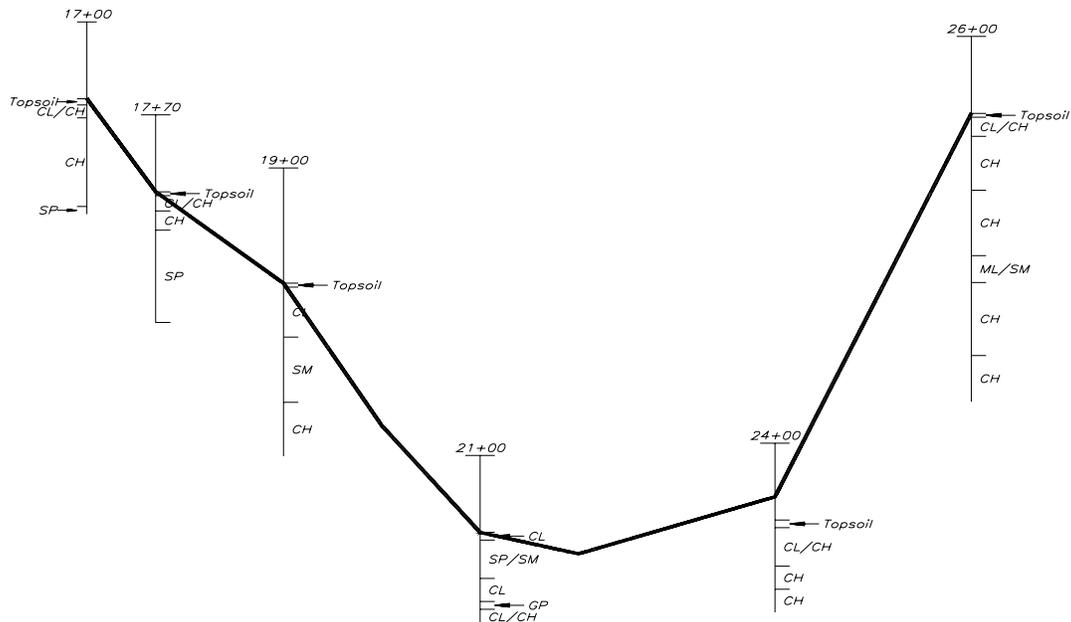
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; This line is a comment
HSCALE=100.0
VSCALE=10.0
TICKSIZE=0.15
TEXTSIZE=0.12
TOPDEPTH=10
TICKBOT=0
HOLE=17+00
TICKSIZE=-0.1
1700,799.2
0.8,Topsoil
2.5,CL/CH
14.0,CH
15.0,SP
HOLE=17+70
TICKBOT=1
1770,787.1
0.5,Topsoil
2.5,CL/CH
5.0,CH
17.0,SP

HOLE=19+00
TOPDEPTH=15
1900,775.2
0.5,Topsoil
7.0,CL
15.5,SM
22.5,CH
HOLE=21+00
2100,742.8
1.0,CL
6.0,SP/SM
9.0,CL
10.0,GP
12.0,CL/CH
HOLE=24+00
2400,744.4
1.0,Topsoil
6.0,CL/CH
9.0,CH
12.0,CH

HOLE=26+00
2600,797.3
0.5,Topsoil
3.0,CL/CH
10.0,CH
18.5,CH
22.0,ML/SM
31.5,CH
37.5,CH
    
```

The above file produces the following annotations (excluding the profile line).



## SOIL LOG ANNOTATION

Some items to note in the sample:

- 1) The lines before the first HOLE= line set up global variables (default settings for the entire file).
- 2) The TICKSIZE=-0.1 line following the HOLE=17+00 line cause the tick marks (horizontal lines) to be drawn to the left of the vertical line since it is a negative value.
- 3) The TICKBOT=1 line following the HOLE=17+70 forces the bottom horizontal line to be drawn for that hole only.