# Modeling with ASCII Text Survey Data
Borrow Pit Modeling & Volumes II

Unlike the first borrow pit example (page 191), this second example makes use of a starting survey that documents the pit's original topography and a final survey that documents the pit's ending topography, which should result in a more accurate measure of the pit volume (this example also adds a couple of issues to make the modeling process a bit more interesting) . . .

The pit area is offsite and not included in a corresponding AGTEK job file, so we'll start from scratch and directly *Open* the starting survey text file in AGTEK.

Step 1: Start the AGTEK program (or select **File > Open** from the menu if already running). In the *Open* dialog, change **Files of type** to **NEZ Text Files**, navigate to the *Day 2* training folder, click the *pitoriginal.csv* file for this exercise (see *Appendix C*) then click **Open**.

This file displays a formatting error message (see discussion on pages 187-188). Let's click **OK** to close the error dialog and use *Windows Notepad* to see if we can identify the formatting issue (while we're at it, we'll also check the second survey file for this example for any formatting issues).
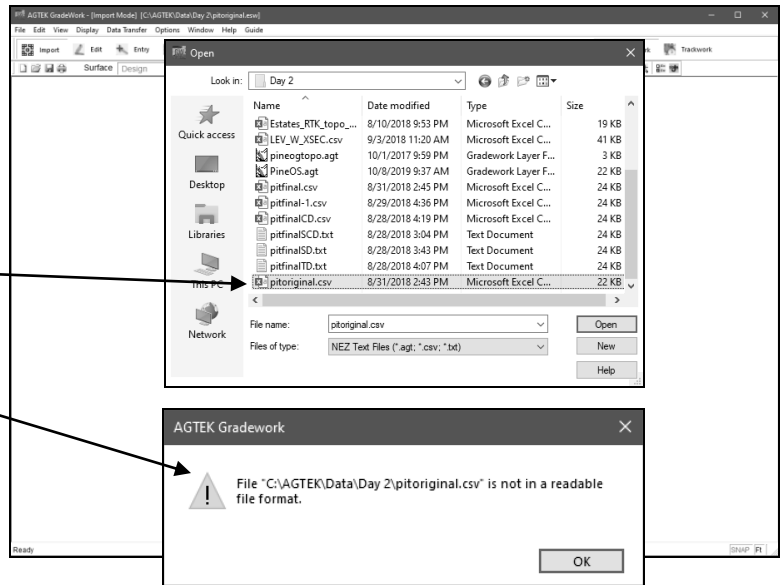
Step 2: Use *Windows File Explorer* to locate the *pitoriginal.csv* file in the *Day 2* training folder then **Right** click the file and select **Open with > Notepad**. Also locate the *pitfinal.csv* file then **Right** click it and select **Open with > Notepad**. The two survey files should now be displayed in separate *Notepad* windows (see below).

The error message in Step 1 is caused by the *P,Y,X,Z, L* header record in the starting survey file (the *PNT,NORTH, EAST,ELEV,LBL* header record in the final survey file will cause the same error when that file is imported in AGTEK)—the headers are useful because they confirm that the *left-to-right* field sequence for the survey point records are compatible in both files (per page 187) but we must remove the headers from these files before they can be imported by AGTEK. The *0,0,0,0,FILE* record in the starting survey file is not a survey point record but it won't cause an error (it can be deleted in *Notepad* or in AGTEK). The last thing to note with these files is that they don't share the same horizontal and vertical reference values (compare the records labeled *CP1* in both files)—we'll adjust for this issue with some later steps.

Step 3: In each *Notepad* window, drag select the header record, press **Delete** *twice* (the second deletion removes the resulting empty record) then select **File > Save As** from *Notepad's* menu to save these changes (let's append *EDIT* to the save as names for resulting *pitoriginalEDIT.csv* and *pitfinalEDIT.csv* edited files—see *Notepad Save As Tip* at top of next page). Both *Notepad* windows can be closed after completing and saving the edits in this step.

Starting Survey File (*pitoriginal.csv*):

```
pitoriginal.csv - Notepad
File  Edit  Format  View  Help
P,Y,X,Z,L
0,0,0,0,FILE
1,5000.000,5000.000,1000.000,CP1
2,5003.330,5519.546,1007.823,CP2
100,4534.526,5042.829,1017.219,GS
101,4534.560,5047.829,1017.191,GS
102,4534.595,5052.829,1017.162,GS
103,4534.630,5057.828,1017.134,GS
104,4534.665,5062.828,1017.106,GS
105,4534.699,5067.828,1017.077,GS
```

Final Survey File (*pitfinal.csv*):

```
pitfinal.csv - Notepad
File  Edit  Format  View  Help
PNT,NORTH,EAST,ELEV,LBL
100,1000.000,1000.000,100.000,CP1
101,1003.313,1519.572,107.849,CP2
102,946.268,1060.285,100.773,TOP
103,941.269,1060.193,100.851,TOP
104,936.271,1060.100,100.928,TOP
105,931.272,1060.008,101.005,TOP
106,926.274,1059.916,101.082,TOP
107,921.275,1059.824,101.159,TOP
108,916.277,1059.731,101.236,TOP
```

199