Create Stacked Profiles

The Discover **Stacked Profile** tool creates a line graph of a nominated field displayed along a traverse base line. Stacked profile presentations of line oriented data are frequently used in geophysical and geochemistry data analysis.

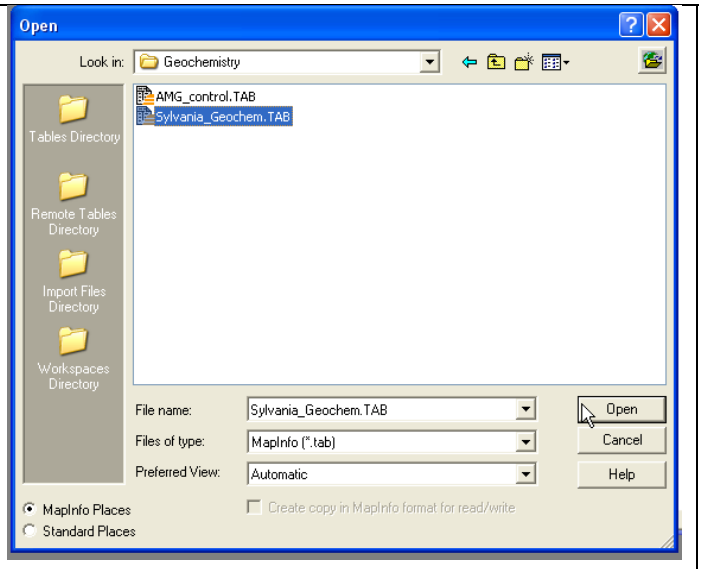
Advantages offered by stacked profiles over imagery or point displays include:

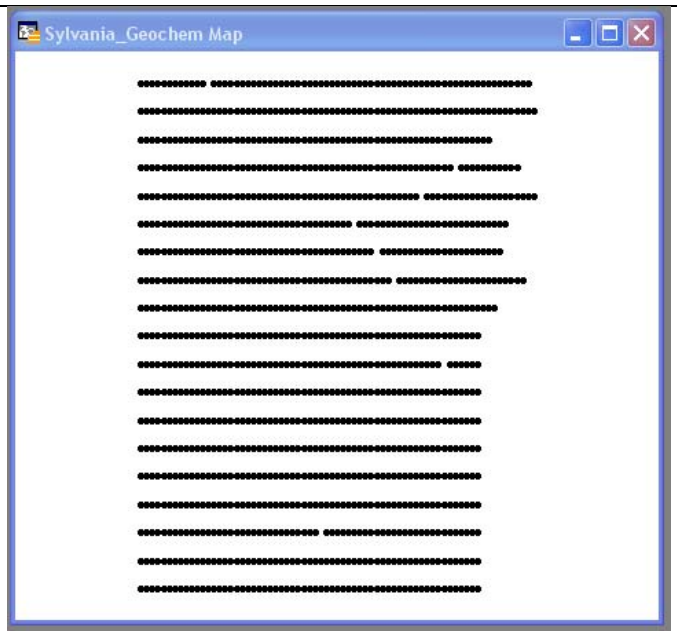
- subtle trends and anomaly correlation from line-to-line can be subtle and easier to identify or display in profile data compared with contouring or imagery
- multiple data channels can be displayed at the same time with identical or varying scaling
- various filter operators can be applied to line data and the results optimally displayed in stacked profile form
- Stacked profiles created within Discover offer the following features:
- control over clipping (high and low) thresholds
- filling of a profile above or below a definable baseline (a variable area presentation)
- linear or logarithmic scaling

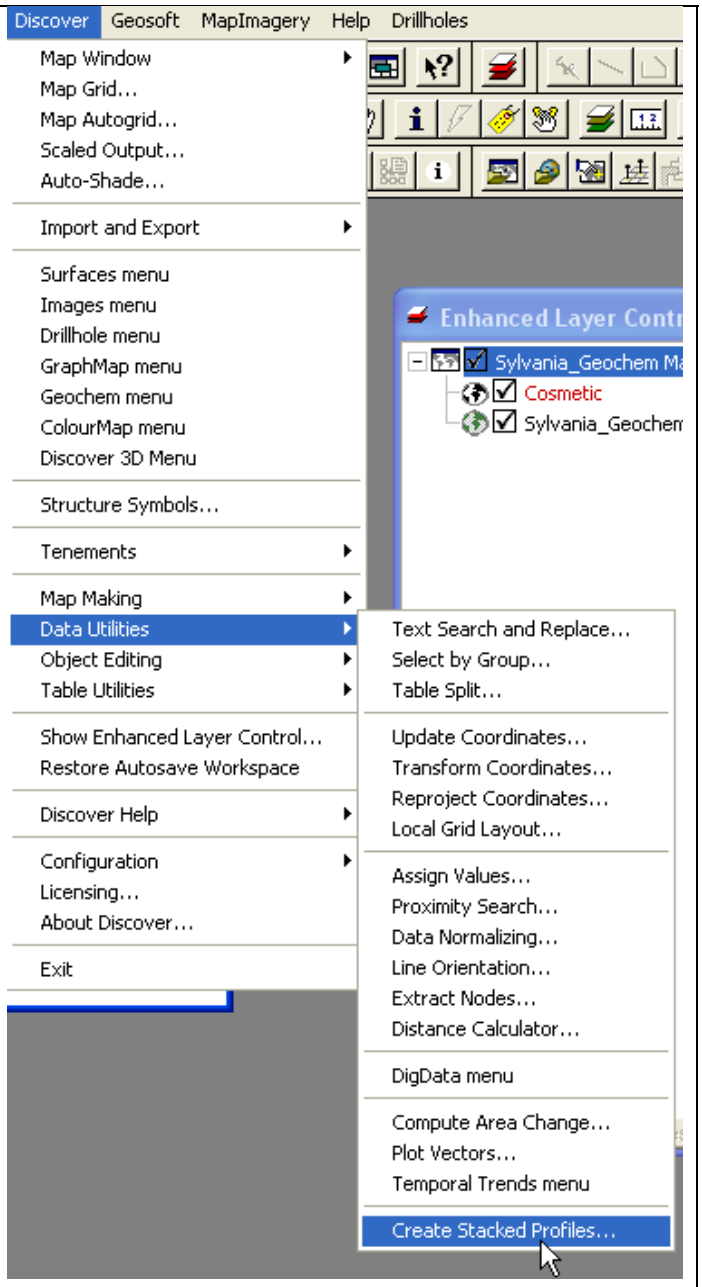
In order to generate a stacked profile the data table must contain a column with a unique line identifier attribute (e.g. line number) and at least one numeric data column on which to create the profile.

Example 13: Create Stacked Profiles using regular geochem soil survey data

1. Open the SYLVANIA_GEOCHEM table from the **Encom Training\Sylvania\Geochemistry** folder.

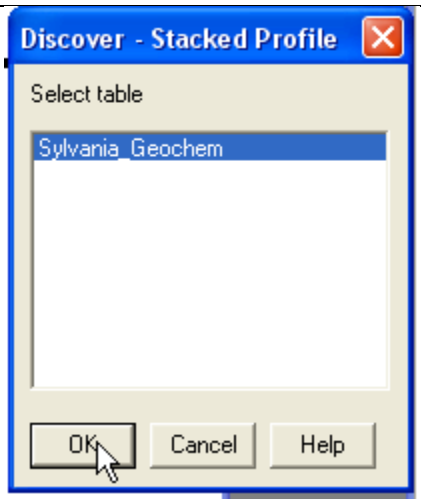


2. Display all the data in a map window.	

3. Select **Discover>Data Utilities>Create Stacked Profiles**	

4. Select the SYLVANIA_GEOCHEM table from the **Dataset** pull-down list

5. Click **OK**



6. Select the data column to display in the profile from the **Field** pull-down list. For the purposes of this exercise we will grid the **Au** field.

7. Select the column containing the unique line identifying information from the **Line** pull-down list.

8. Check the **Draw Across Nulls** box to enable Discover to continue to draw a profile when a blank data field is encountered. In the event of larger gaps in the sampling interval within the one sample line, check the **Distance Threshold** box and enter a distance. When the distance between two sample points is greater than the value entered as the distance threshold, Discover will start a new profile on the same sampling line. If a distance threshold is not entered, a continuous profile for the line will be displayed

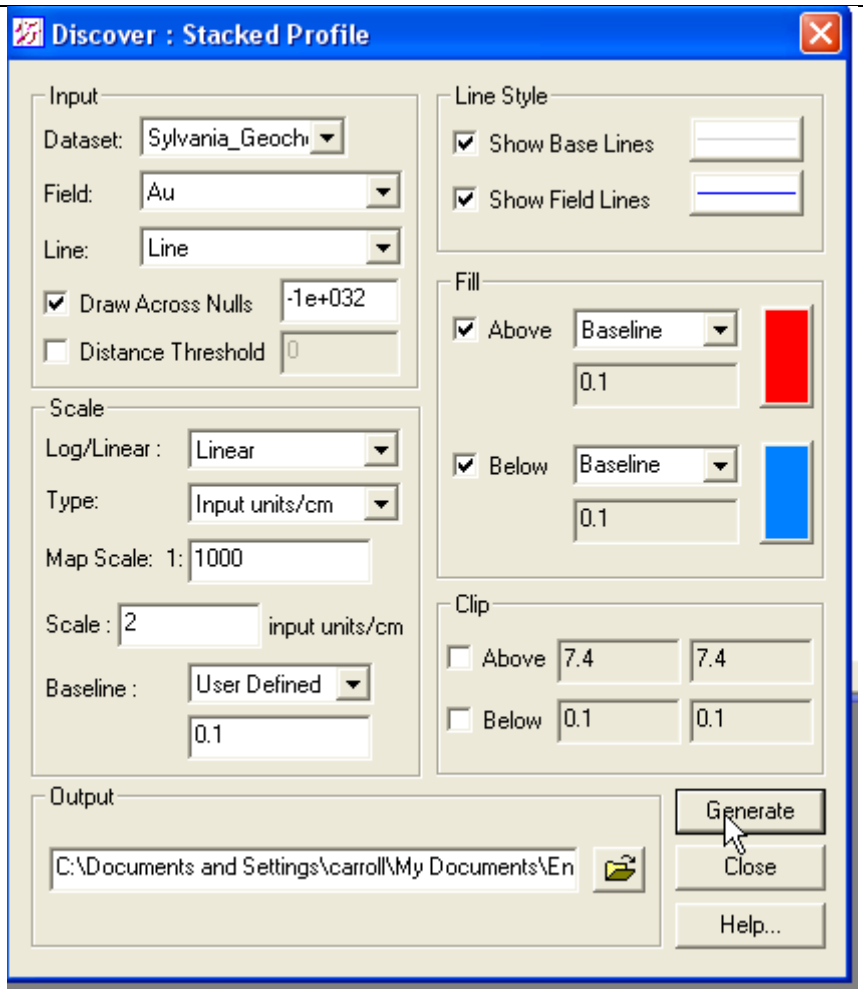
Scaling of the field data can be linear or logarithmic and comply with the **Scale Factor** of the map in which the stacked profiles are displayed or in units per centimeter.

9. The baseline or x-axis may be displayed with the profile. Use the **Baseline** pull-down list to select from the range of baseline options. A baseline may be created according to the minimum, maximum, average or median value of the data column. A user-specified baseline value can also be entered.

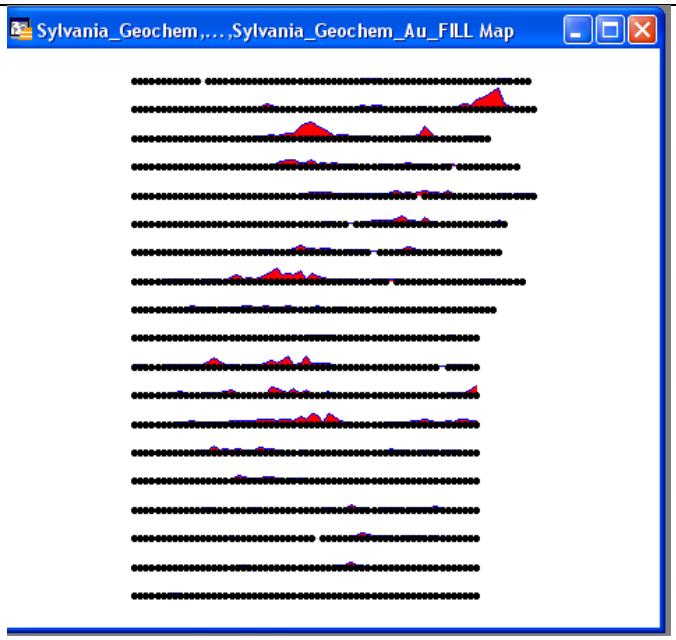
10. In the **Line Style** control check the **Show Base Lines** box to display the base line or x-axis of the profile. Check the **Show Field Lines** to display the profile for the selected data column. Use the line style buttons next to each option to select the desired line style and colour.

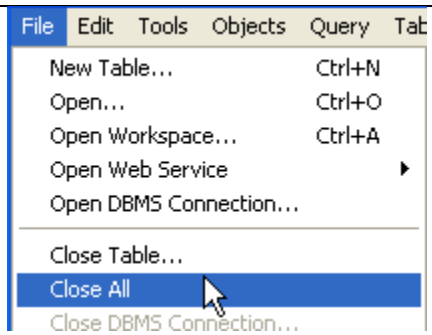
A profile may be filled with a solid colour to denote samples with values above or below the baseline or a user specified value. Click on the colour buttons to change the fill colour.

The minimum and maximum values in the data column are automatically inserted into the **Clip** control. Check the **Above or Below** box to enter another value in order to clip the data range used to the specified data range.



11. The stacked profiles are output to a single table and added as a new layer to the mapper containing the source data. If you have elected to fill above or below the baseline the fill will be written to a separate layer as a series of polygon objects.



12. Close all currently open tables on completion of this exercise	

Congratulations, you are now ready to move on to the next lesson. If you are still unsure of any of the concepts here, or you wish to investigate proportional symbol sizes in more detail (from a geochemical point of view) then you may wish to attempt the following exercise.

To close your work and leave MapInfo:

Choose **File > Close All** and click **Discard**.
Choose **File > Exit.**