

Calculate Grids in GM-SYS Profile Modelling

The GM-SYS Profile *Grid Calculation* dialog enables you to calculate the response of your model over an area and generate a Geosoft grid (.grd) file as output. The model origin, azimuth, and coordinate system information are used to correctly georeference the output grid.

You can calculate the gravity or magnetic grid response, or one of the gravity gradient components if Advanced Profile modeling is licensed. Calculate the response at a specified constant terrain separation or at a constant elevation. The Calc Geosoft Grids and Calc Vert Geosoft Grids items in the Calculate menu are "grayed-out" and inactive if GM-SYS Profile is not licensed at the Intermediate or Advanced level.

 *Grid output of the magnetic gradient components is not supported. Generate a vertical (section) grid containing the distribution of any physical property (density, susceptibility, remanent magnetization or velocity). You can also calculate the gravity response of the model on a vertical section.*

Calculating a Grid Response

Calculate a component of the model response across a rectangular area and export as a georeferenced grid. The output grid will be georeferenced using the Coordinate System and azimuth assigned to the model. The response may be calculated at a constant elevation or a constant terrain separation.

By default, the dimensions of the grid are taken from the current Plan View. You may want to refine an existing View or create a special View for this, so that the grid dimensions and location are exactly as you would like.

To Calculate Grid Response

1. On the *Compute* menu, select **Calc Geosoft Grids**. The *Calculate Geosoft Grid Response* dialog appears.

The screenshot shows the 'Calculate Grid Response' dialog box with the following settings:

- Param. to grid:** Gravity
- Grid file:** (empty)
- Elevation(Z):** Fixed Elevation, 0 km
- Grid Size & Range:**

	Minimum	Maximum	Cell Size	Unit
X	7.849277	21.870161	1	km
Y	-2.31589043	4.90611013	1	km

2. From the **Param. to grid** drop-down list, select the gravity or magnetic component whose response you wish to calculate.
3. On the *Grid file* field, browse to the output grid name and location.
4. From the **Elevation(Z)** drop-down list, select a **Fixed Elevation** or **Terrain Separation (+up)**.
5. Specify the value and units.
6. In the *Grid Size & Range* box, specify the horizontal limits. The default values are taken from the current Plan View limits. Also, set the cell size and units of the grid.
7. Click **Compute & Save**. The *Compute Grids* progress bar appears and the grid is written.

Calculating a Vertical Grid Response

Calculate the model gravity response, or export one of the physical properties of the model, as a vertical section grid suitable for displaying in a 3-D View. The output grid will be georeferenced using the Coordinate System and azimuth assigned to the model.

By default, the dimensions of the grid are taken from the current limits of the Depth Pane. You may want to refine an existing View or create a special View for this, so that the grid dimensions and location are exactly how you want them.

To calculate a Vertical Grid Response

1. On the *Compute* menu, select **Calc Vert Geosoft Grids**. The *Calculate Vertical Grid Response* dialog appears.

	Minimum	Maximum	Cell Size	Unit
X	7.849277	21.870161	0.1	km
Z	-1.5	1.75	0.1	km

2. From the **Param. to grid** drop-down list, select "gravity" or physical property you want to populate the grid.
3. On the *Output Grid* field, browse to the output grid name and location.
4. In the *Grid Size & Range* box, specify the horizontal and vertical limits. Also, set the cell size and units of the grid.
5. Click **Compute & Save**. The *Compute Vertical Grids* progress bar appears and the grid is written.

How-To Guide Publication Date: 06/08/2013

Copyright 2013 Geosoft Inc. All rights reserved.