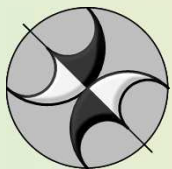


# ModelBuilding using Pad Image

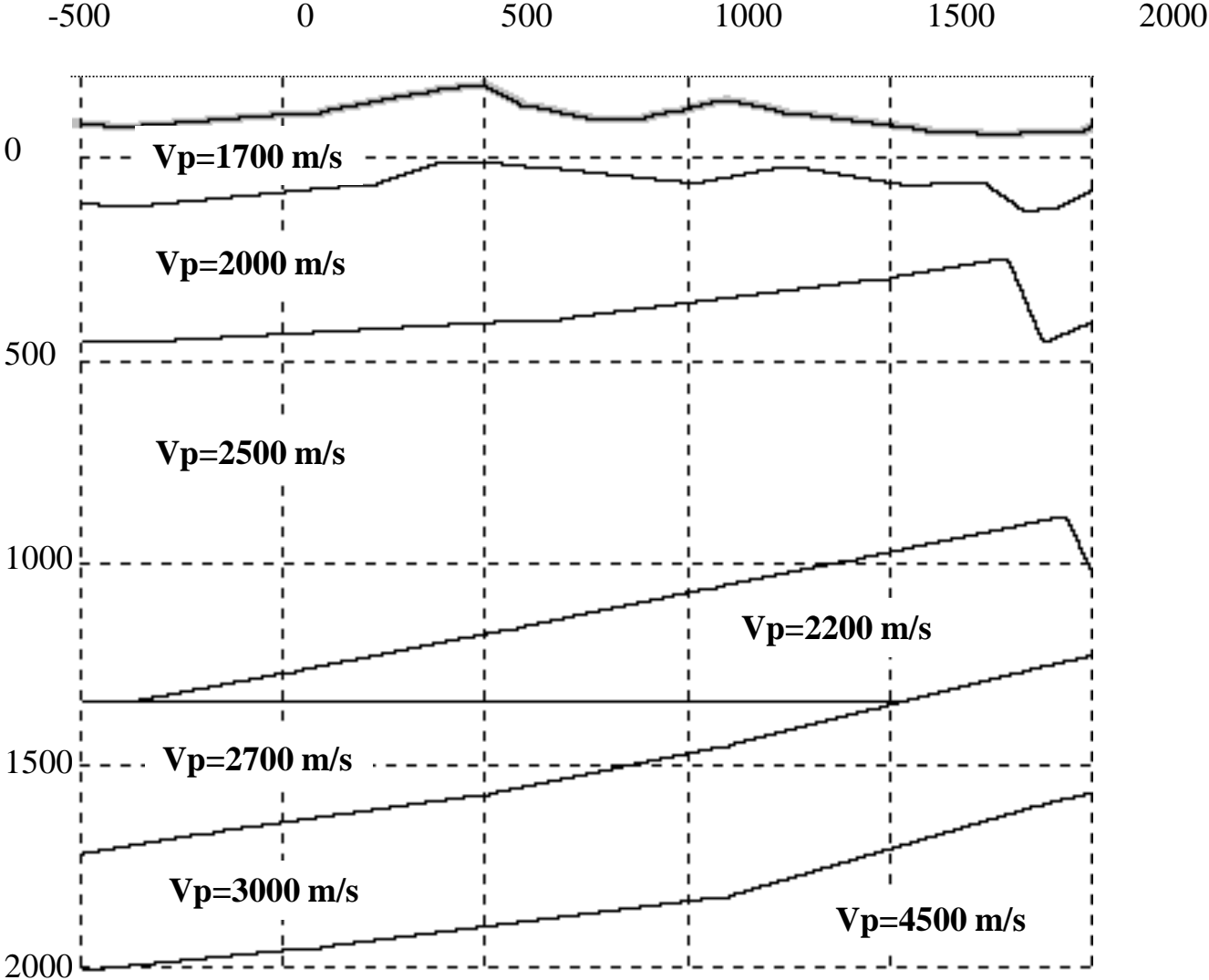


Jan-12

[www.tesselal-geo.com](http://www.tesselal-geo.com)

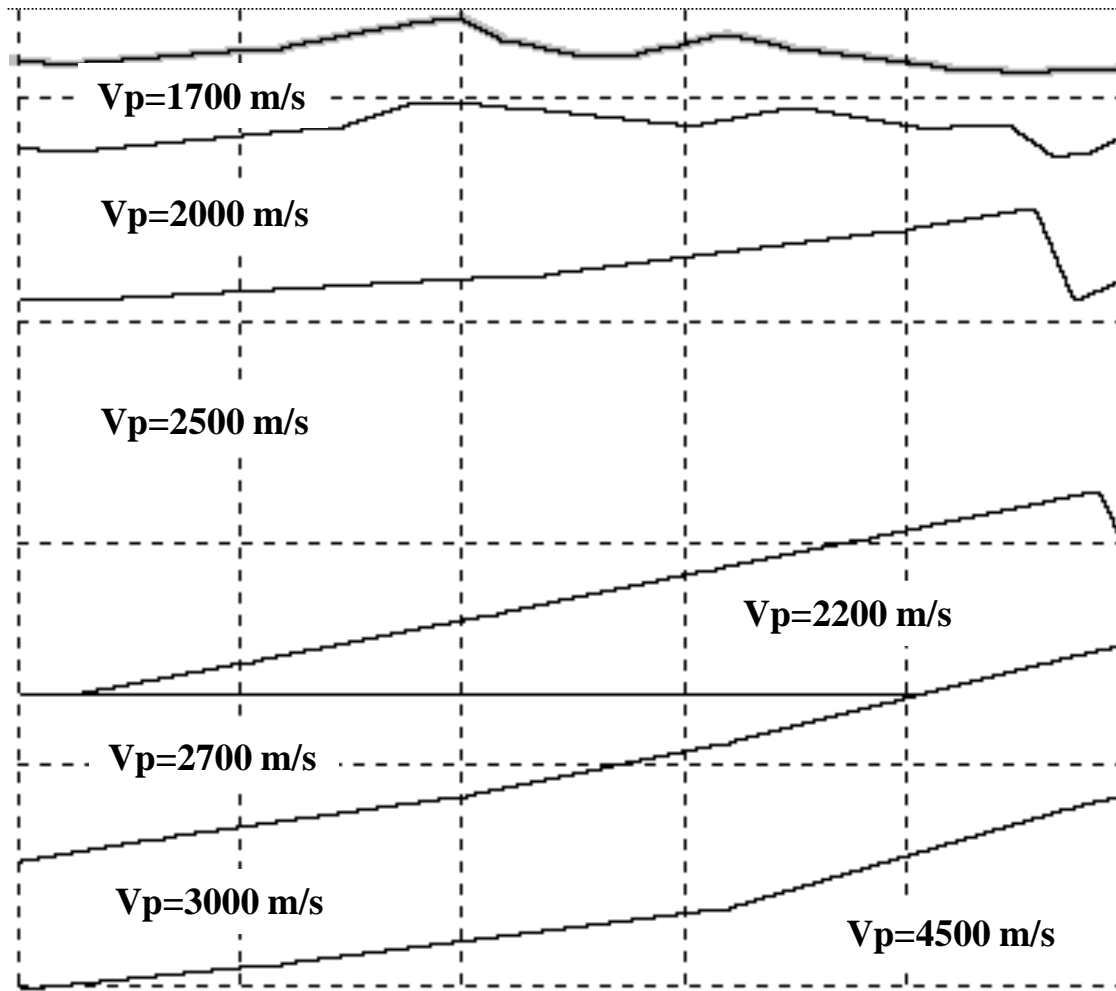
As a template for model building can be used picture in raster format. This picture in \*.ppt format can be transformed into \*.bmp format and read into Tesseral 2-D Modelbuilder.

Below is source model in «\*.ppt» format.

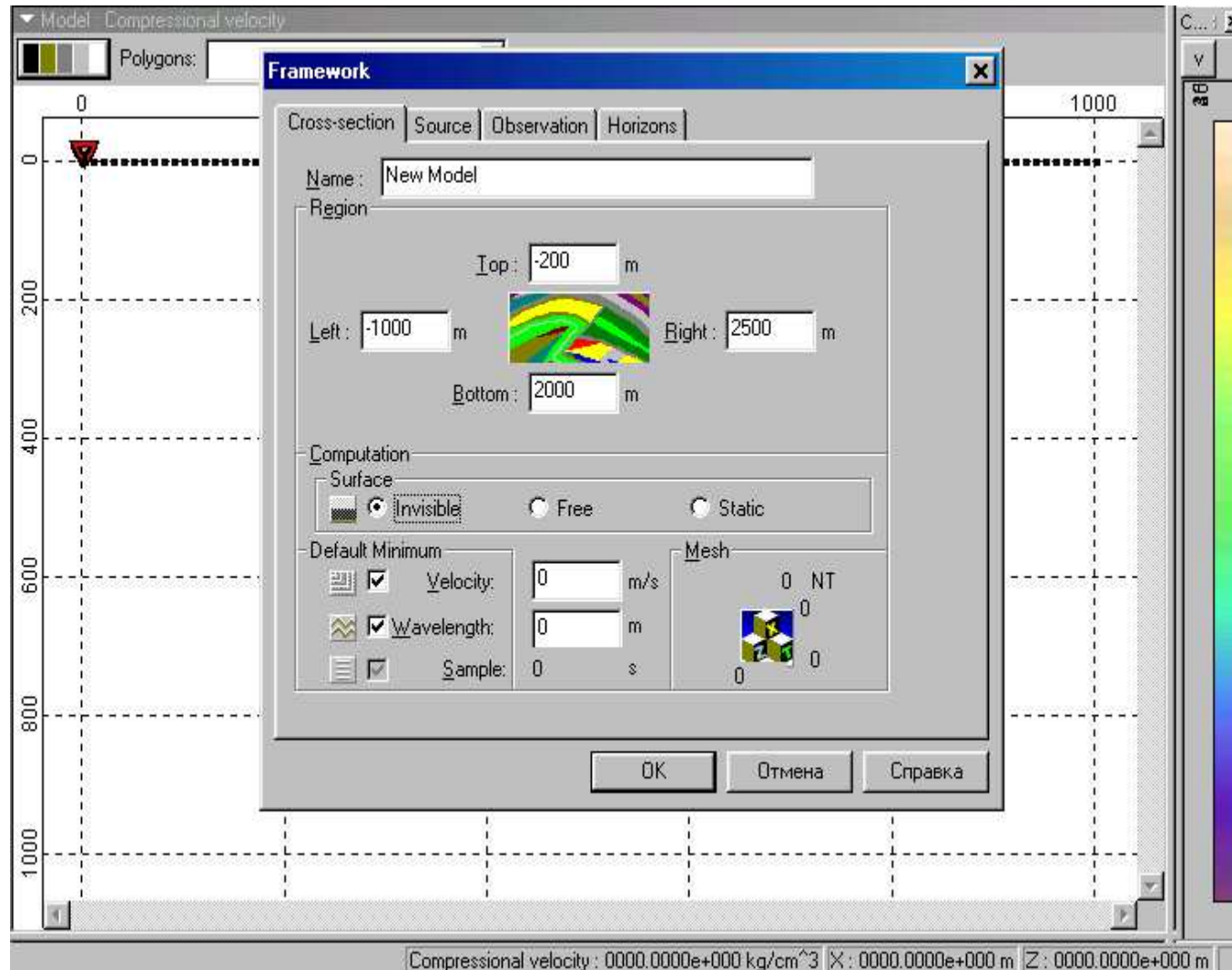


You may make copy without out of frame attributes (remembering coordinate parameters).

Using conventional methods let transform template from PPT format into BMP format.



Activate Tesseral 2D and open new model (of any other, if using template it must be edited). On first page of dialog «*Framework*» enter values of model rectangle. Let notice that they can differ from ones of template. In this case outside of template (pad image) they must be built basing on other information; you can already use some model generally corresponding to pad image.



First polygon covers whole model rectangle, and its final visible boundaries depend on actual model building. Let enter in the «Polygon» dialog physical property values in upper cross-section part or any other within given model physical properties interval.

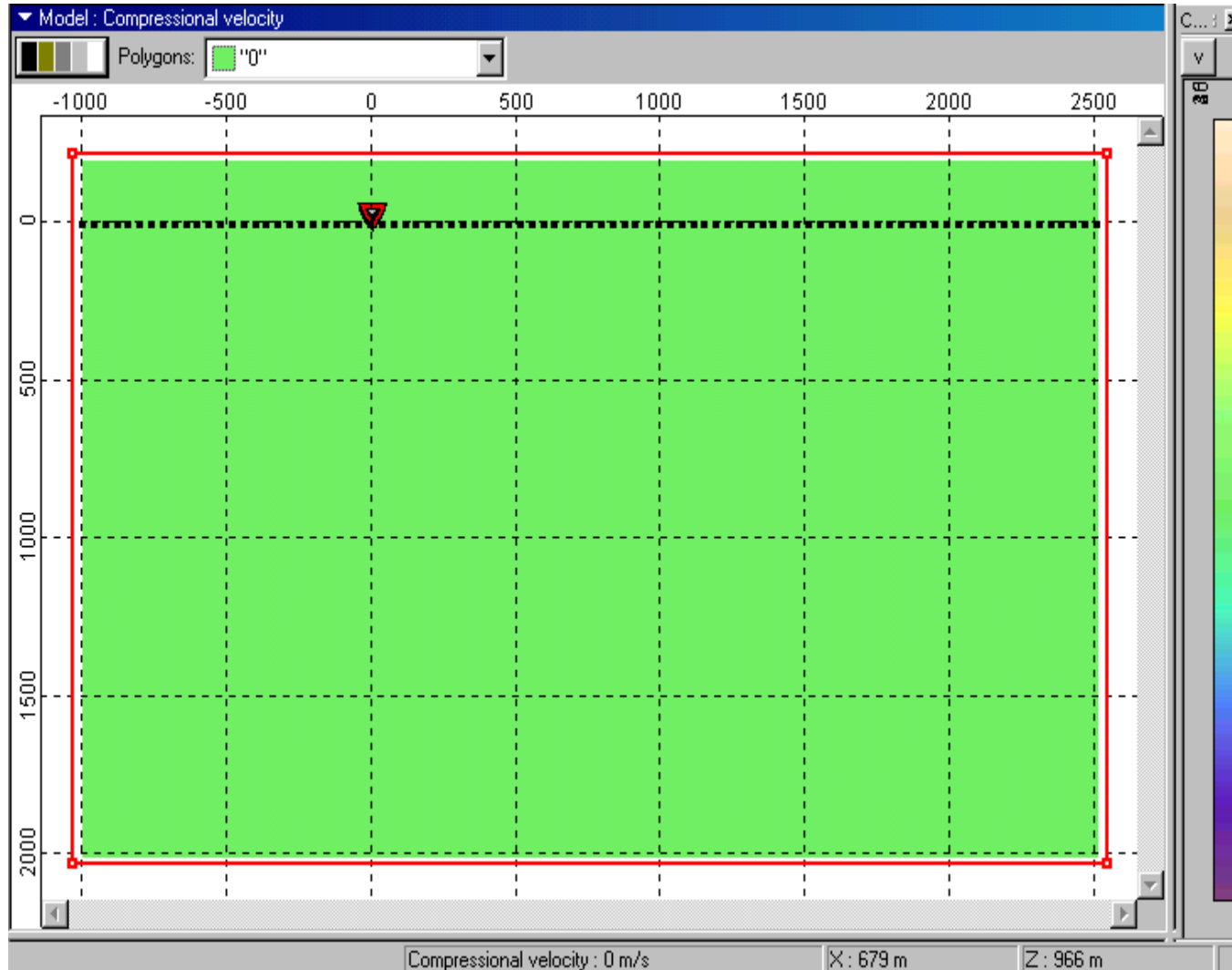
The 'Polygon' dialog box is shown with the following sections and controls:

- Default:** Includes a 'Standard' dropdown menu and several checked checkboxes.
- Physical properties:** Contains input fields for 'Base Point', 'Velocity', 'Compressional' (0 m/s), 'Shear' (0 m/s), and 'Density' (0 kg/m<sup>3</sup>).
- Anisotropy Thomsen's coefficients:** Includes input fields for 'Epsilon', 'Delta', 'Gamma', and 'Phi', along with a 'Fracture...' button.
- Quality:** Contains input fields for 'Compressional' and 'Shear'.
- Horizon:** Includes a 'Muted' checkbox and a 'Bulk' dropdown menu.
- Current Pattern** and **Sample Pattern:** Each has a large empty rectangular area and a 'Load...' button.
- Buttons:** 'Clear', 'Apply Pattern', 'OK', 'Cancel', and 'Help' are located at the bottom.
- Model List:** A table with columns 'Name', 'Compre...', 'Shear v...', and 'Density'. It is currently empty.
- Sample List:** A dropdown menu currently set to 'Sediments', with an 'Average' button next to it.
- Table:** A table with columns 'Name', 'Compre...', 'Shear v...', and 'Density' containing the following data:
 

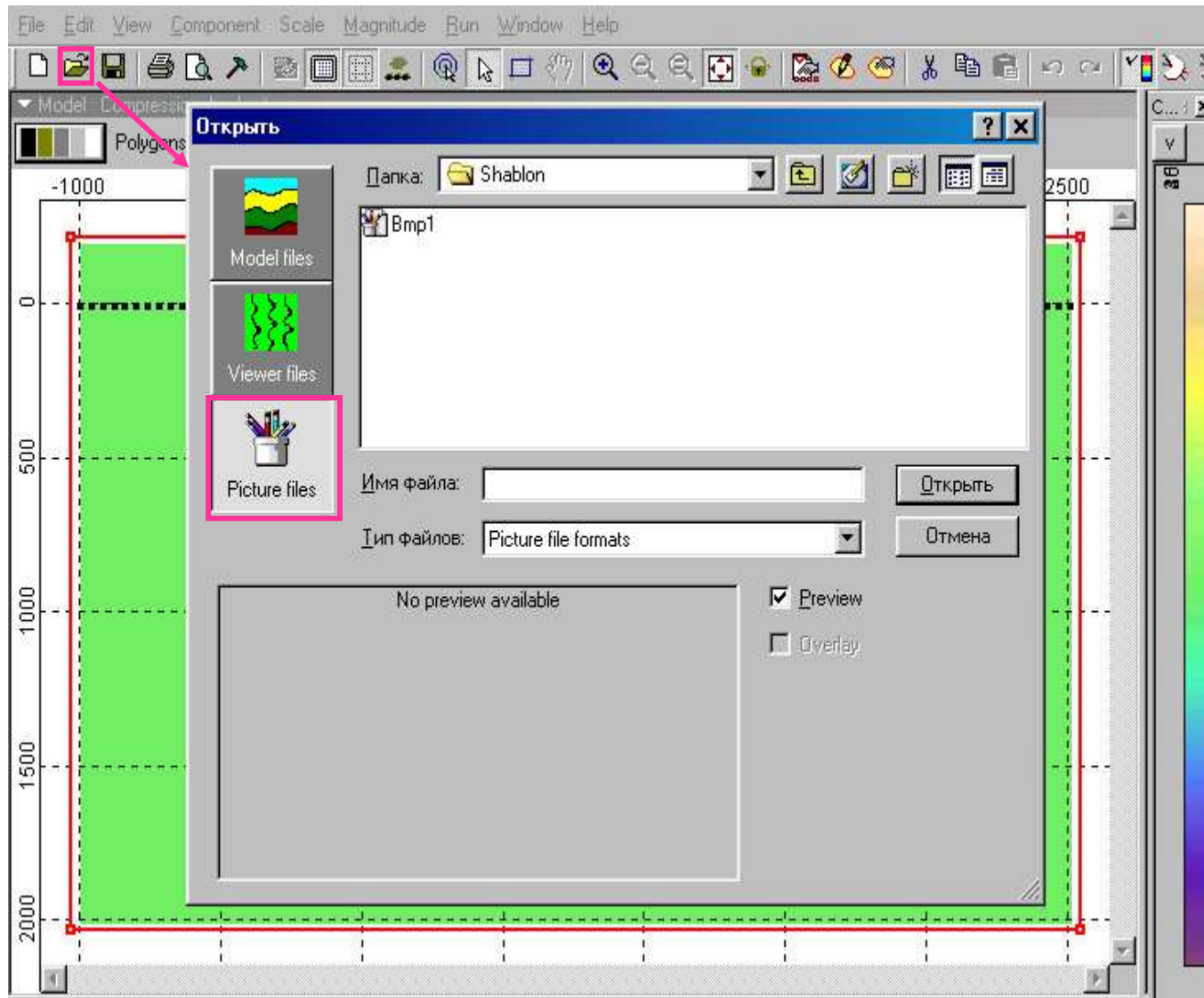
Name	Compre...	Shear v...	Density
Aleurolite [Min]	800	450	1800
Aleurolite [Avr]	2400	1300	2350
Alevrolite [Max]	4000	2200	2800
Anhydrite [Min]	1500	800	2400
Anhydrite [Avr]	4000	2200	2550
Anhydrite [Max]	6000	3300	2900
Argillite [Min]	900	500	1700
Argillite[Avr]	3000	1650	2350
Argillite [Max]	4500	2500	2900
Clay [Min]	500	200	1200
Clay [Avr]	1800	600	1800

At the bottom of the dialog, the status bar displays: Compressional velocity : 0000.0000e+000 kg/cm<sup>3</sup> | X : 0000.0000e+000 m | Z : 0000.0000e+000 m

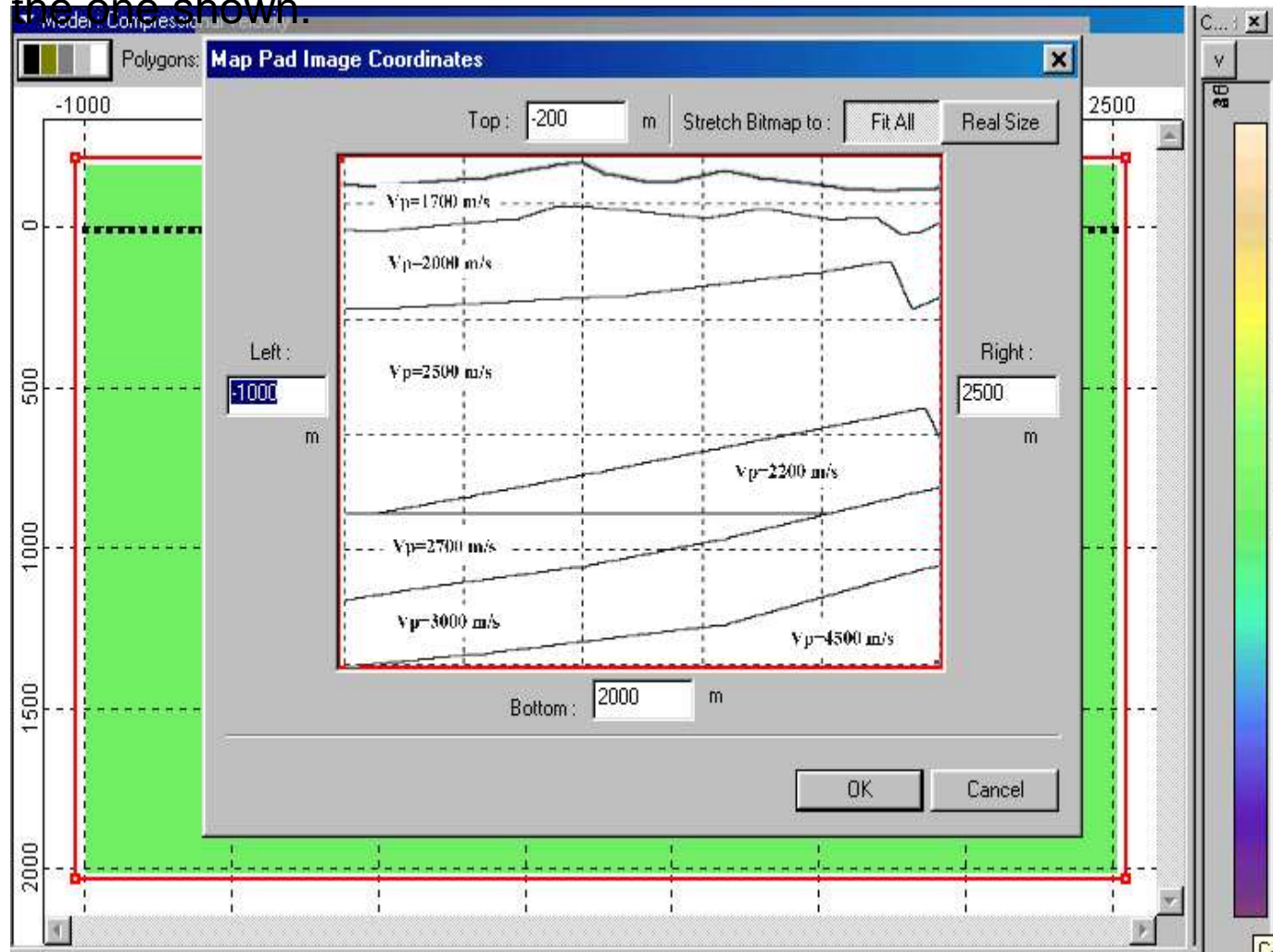
Obtain initial model background.



Let load pad image file. In this case "Bmp1.bmp."

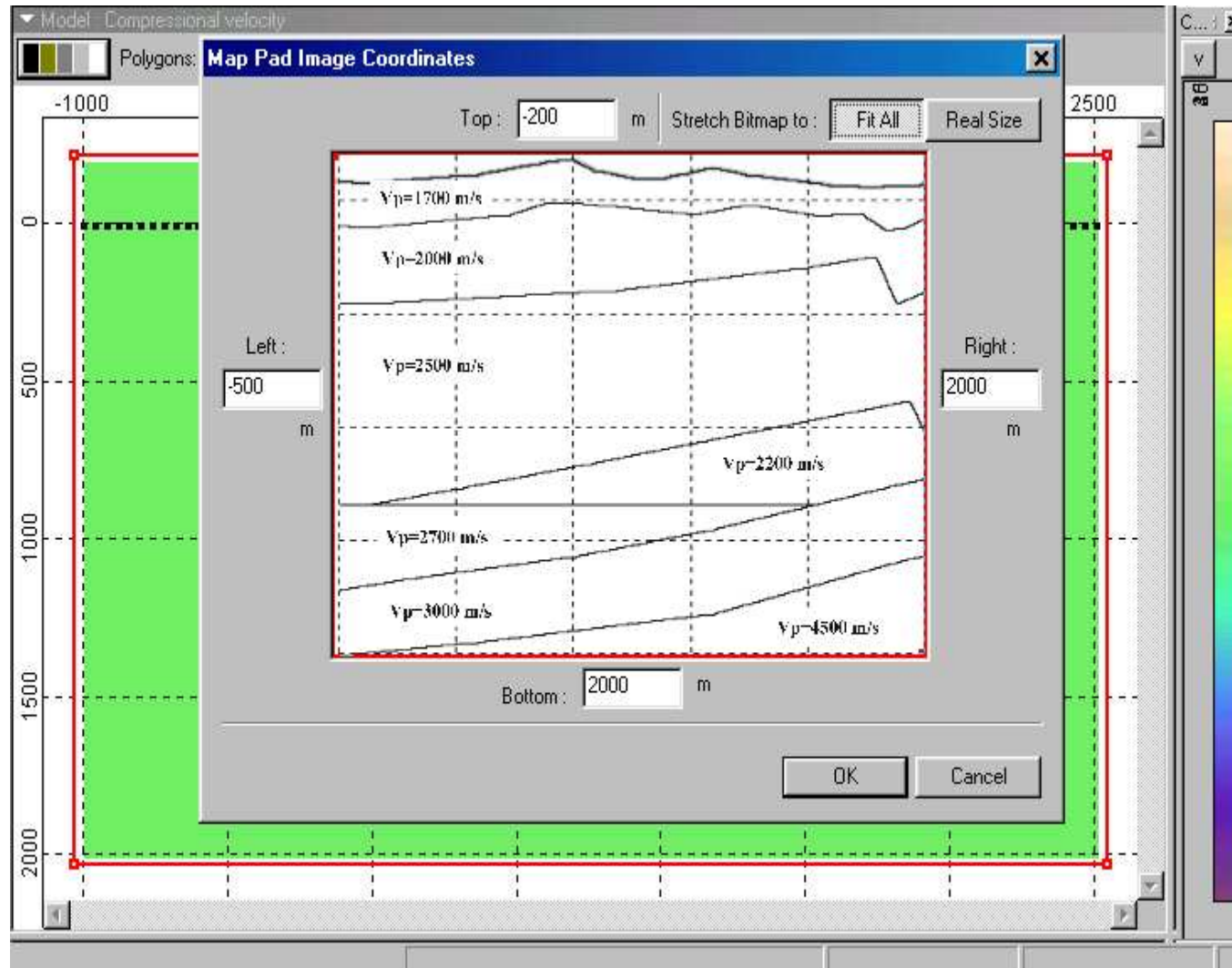


In appeared dialog «*Map Pad Image Coordinates*» are already set pad image rectangle values, and you must edit them in correspondence with the actual ones. You also can draw new pad image rectangle (red line) inside the one shown.

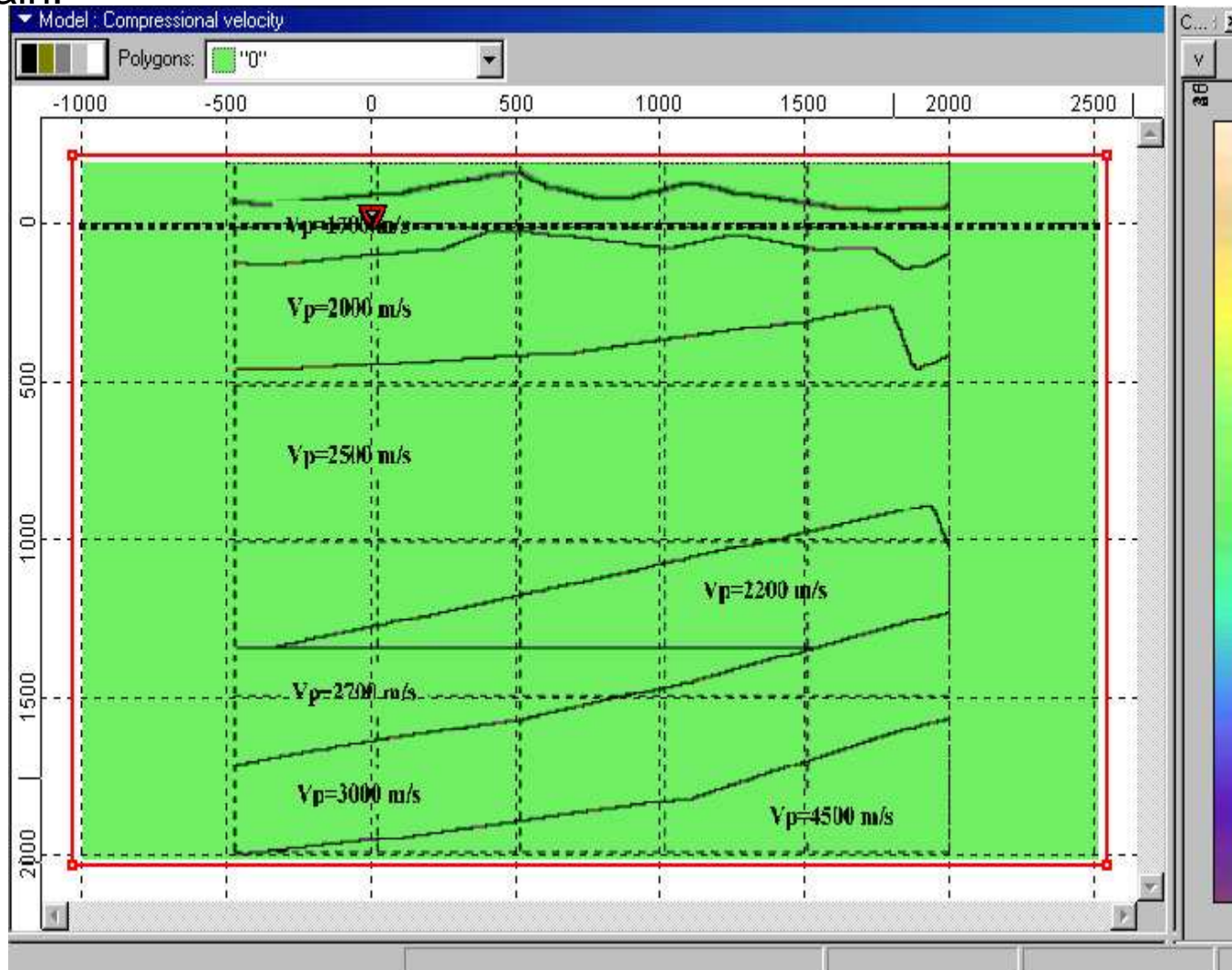




Result of editing of the pad image boundaries.



As result we have corresponding the initial model background and pad image. This kind of imaging can be used for polygon drawings. Let notice that pad image at each model opening is not saved and it must be loaded again.



Model building, setting of observation geometry etc is done in conventional way. Below is shown example of determining of polygon #1 - model observation surface. After tracing upper model boundary using pad image, let fill «Polygon» dialog as shown below.

The 'Polygon' dialog box is shown with the following settings:

- Physical properties:**
  - Default: Standard
  - Base Point: (dropdown)
  - Velocity:
    - Compressional: 1700 m/s
    - Shear: 1000 m/s
  - Density: 1986 kg/m<sup>3</sup>
  - Anisotropy Thomsen's coefficients:
    - Epsilon: 0, Delta: 0
    - Gamma: 0, Phi: 0
  - Quality:
    - Compressional: 0
    - Shear: 0
- Horizon:** Muted (checkbox), Bulk (dropdown)
- Current Pattern:** (empty)
- Sample Pattern:** (empty)

The 'Model List' table is as follows:

Name	Compre...	Shear v...	Density
1	1700	--	--

The 'Sample List' table is as follows:

Name	Compre...	Shear v...	Density
Aleurolite [Min]	800	450	1800
Aleurolite [Avr]	2400	1300	2350
Aleurolite [Max]	4000	2200	2800
Anhydrite [Min]	1500	800	2400
Anhydrite [Avr]	4000	2200	2550
Anhydrite [Max]	6000	3300	2900
Argillite [Min]	900	500	1700
Argillite [Avr]	3000	1650	2350
Argillite [Max]	4500	2500	2900
Clay [Min]	500	200	1200
Clay [Avr]	1800	600	1800

Result of this step is a model with relief of observation surface. It can be edited, on it can be positioned sources and receivers etc.



# Example of building second polygon

In such way can be built rest of the model.

