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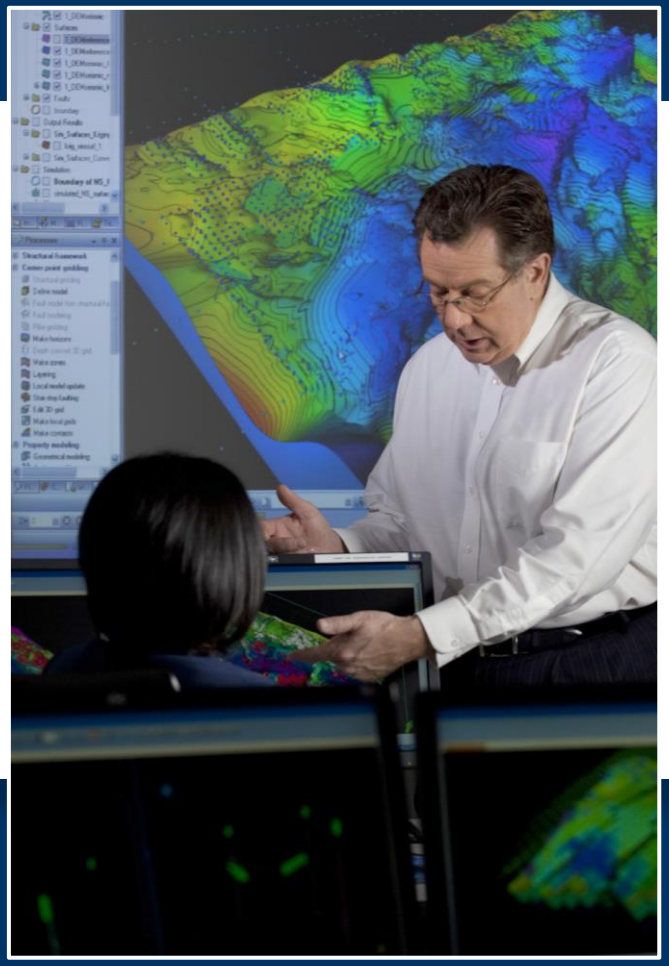
Petrel Geophysics Module 4: Seismic intersection and data manipulation

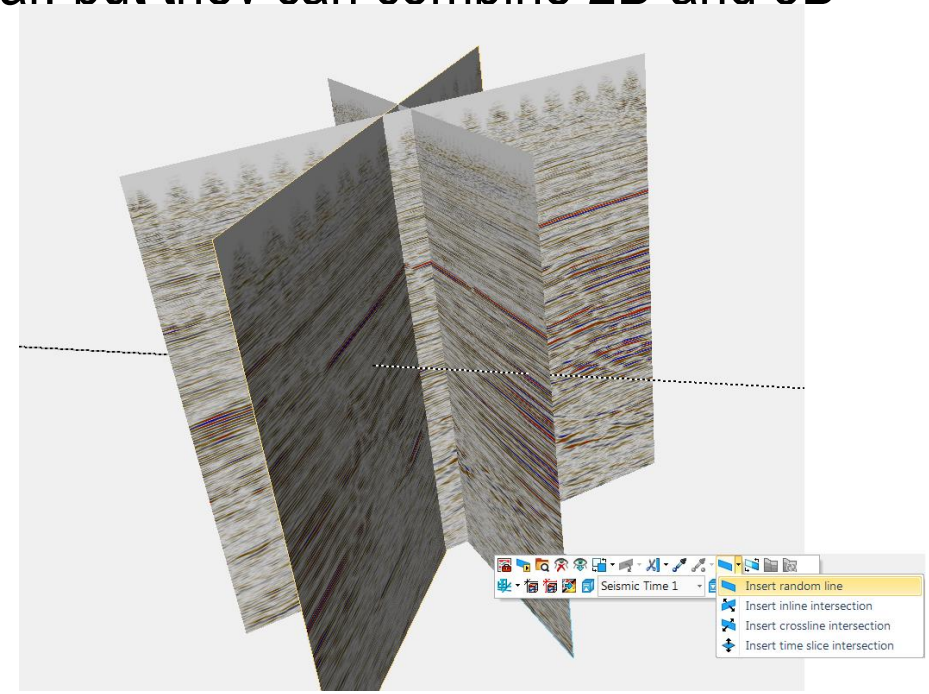
Schlumberger-Private

Lesson 1: Random lines



Random lines

- Random lines and polyline intersections are vertical lines that do not follow the full length of an inline or a crossline.
- Composite intersections are similar. but thev can combine 2D and 3D seismic data.
- Convert any intersection or line coming from a seismic cube (inline, crossline, random, or composite) into a standalone 2D seismic line.



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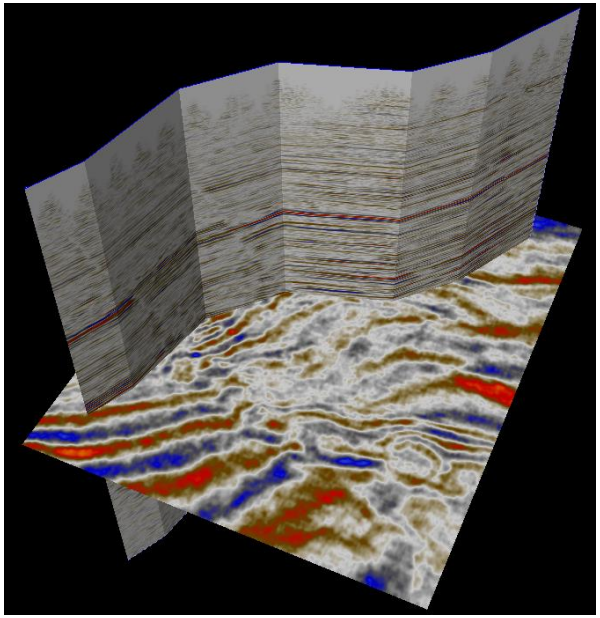
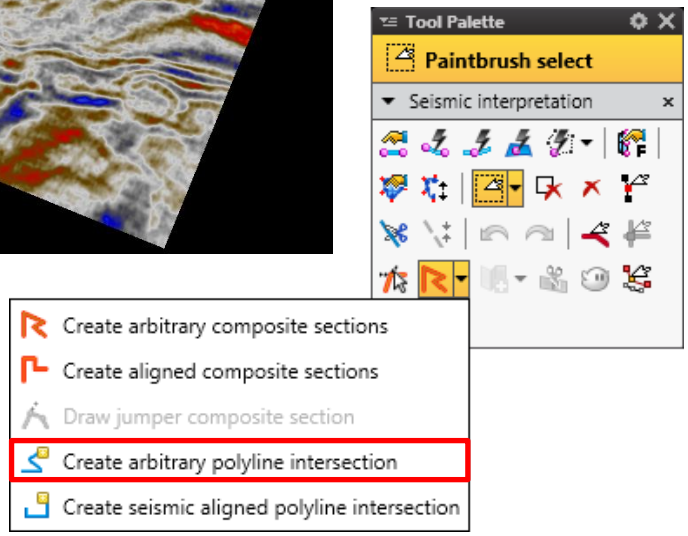
Polyline intersection: Arbitrary polyline

- Polyline intersections are composed of two parts: the polygon trace and the vertical seismic intersection.
- The polygon trace is stored under the General intersection object in the **Input** pane under the appropriate seismic volume.





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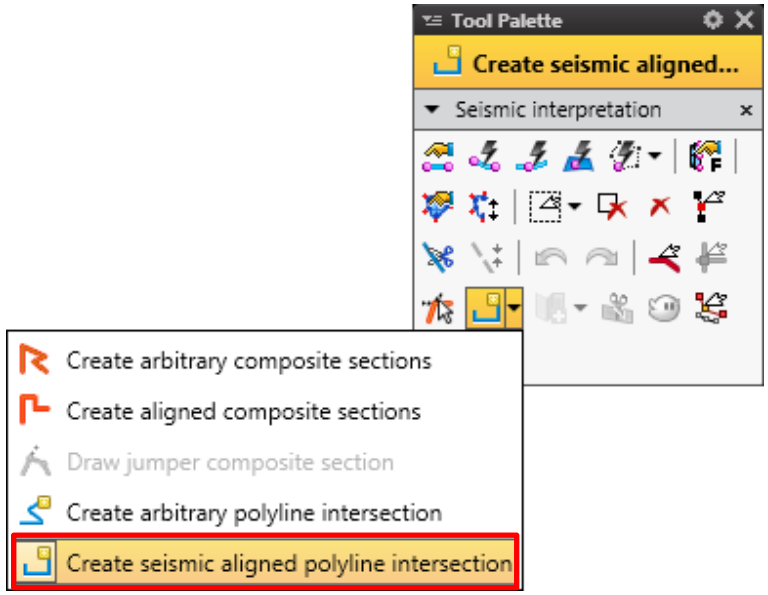
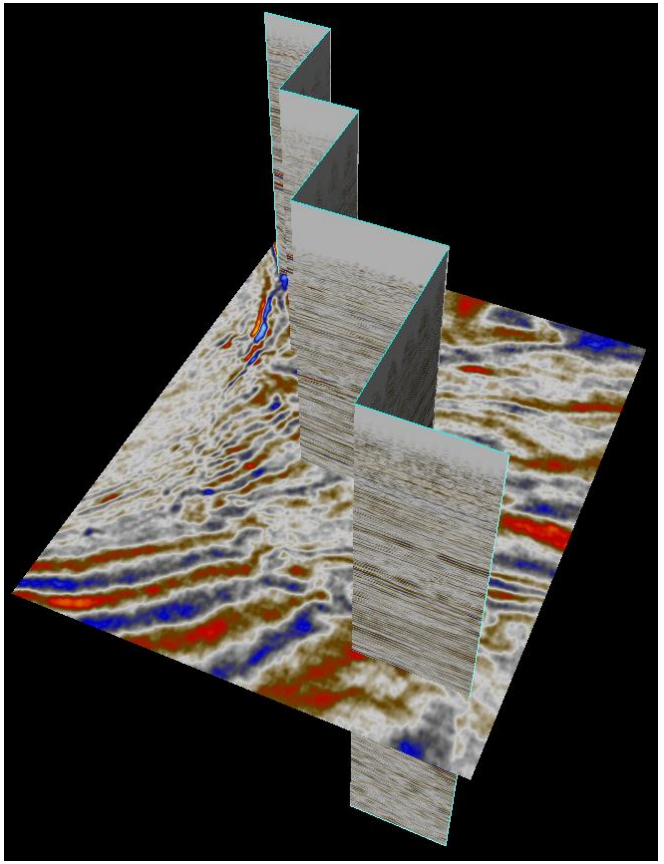
Polyline intersection: Seismic aligned polyline





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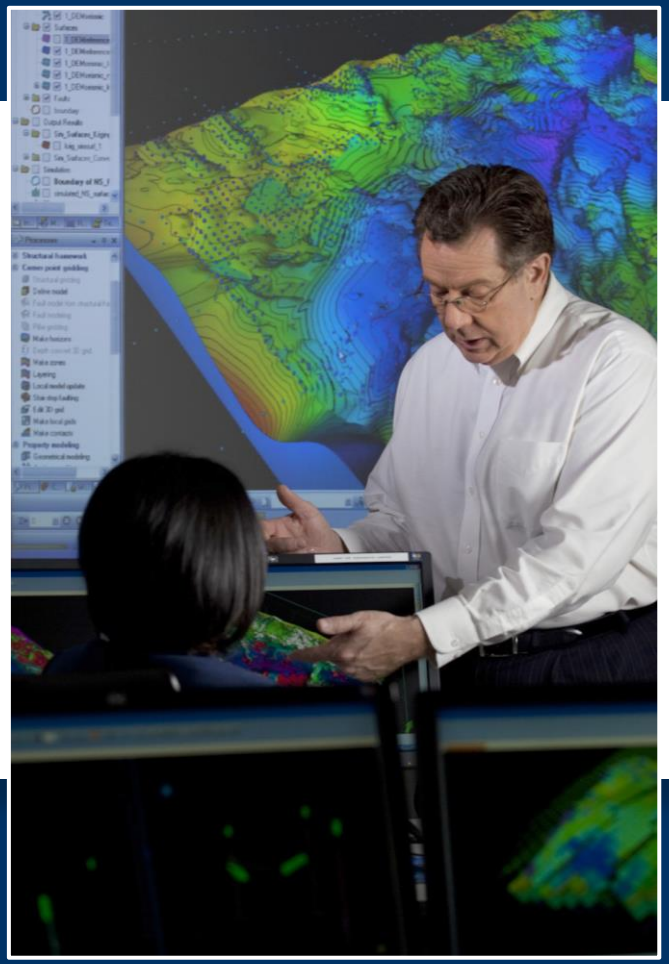
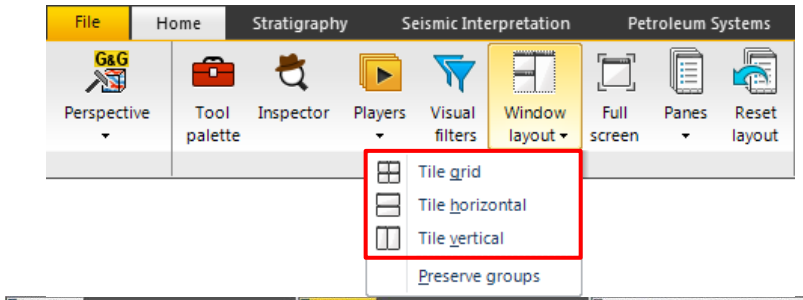
Lesson 2: Seismic data visualization and manipulation

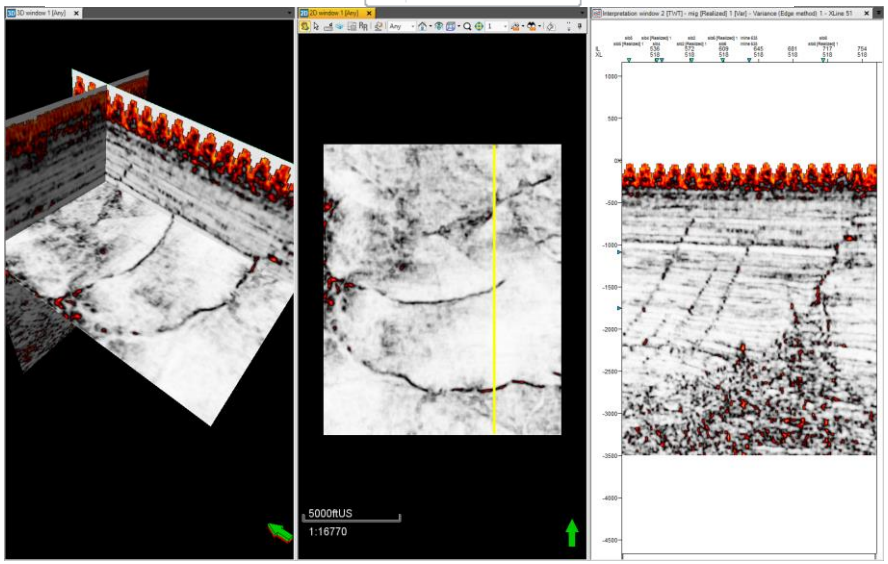


Window tiling

Choose your tiling arrangement.

On the **Home** tab, in the **View** group, click *Window layout*.





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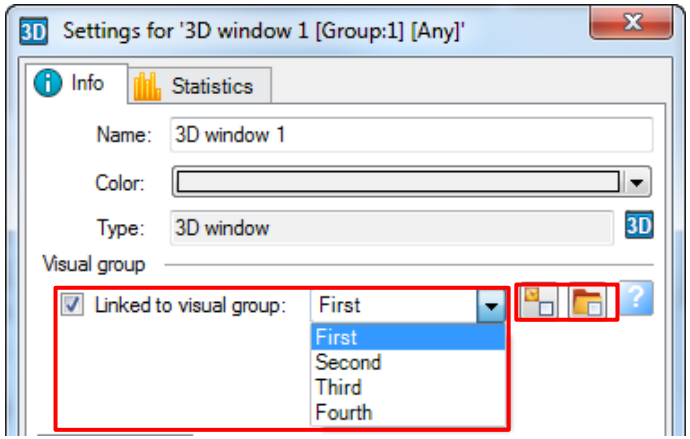
Link windows to visual groups

This function allows you to simultaneously display data in different windows.

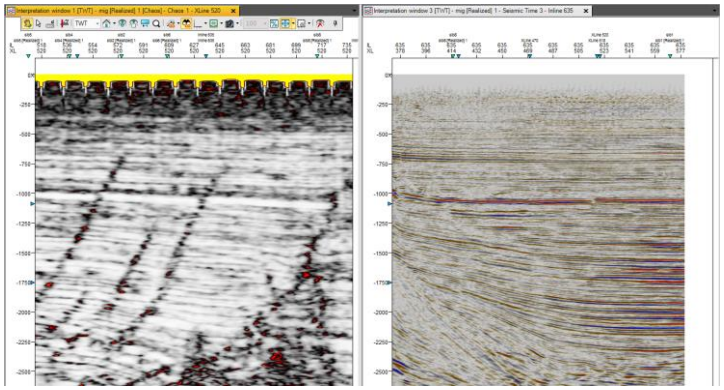
When objects are posted in one window, they appear in other linked windows. When you change the display of objects in the active window, the linked windows are affected.

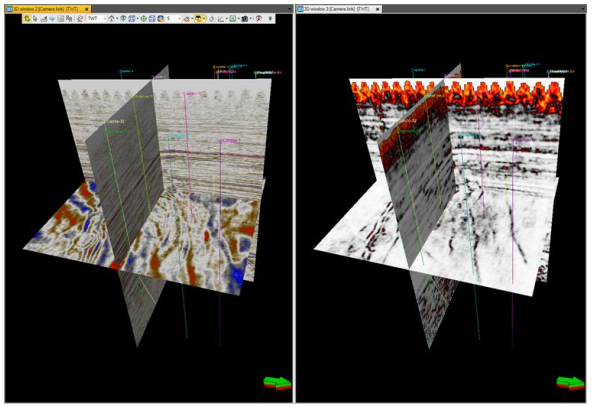


Camera link

You can link two or more **3D** or **Interpretation** windows with a camera so that when you zoom, pan, and squeeze the objects in one window, the action is synchronized in the linked windows. You can display different objects in each window.

When you click *Link camera*  , the names of all linked windows are updated.

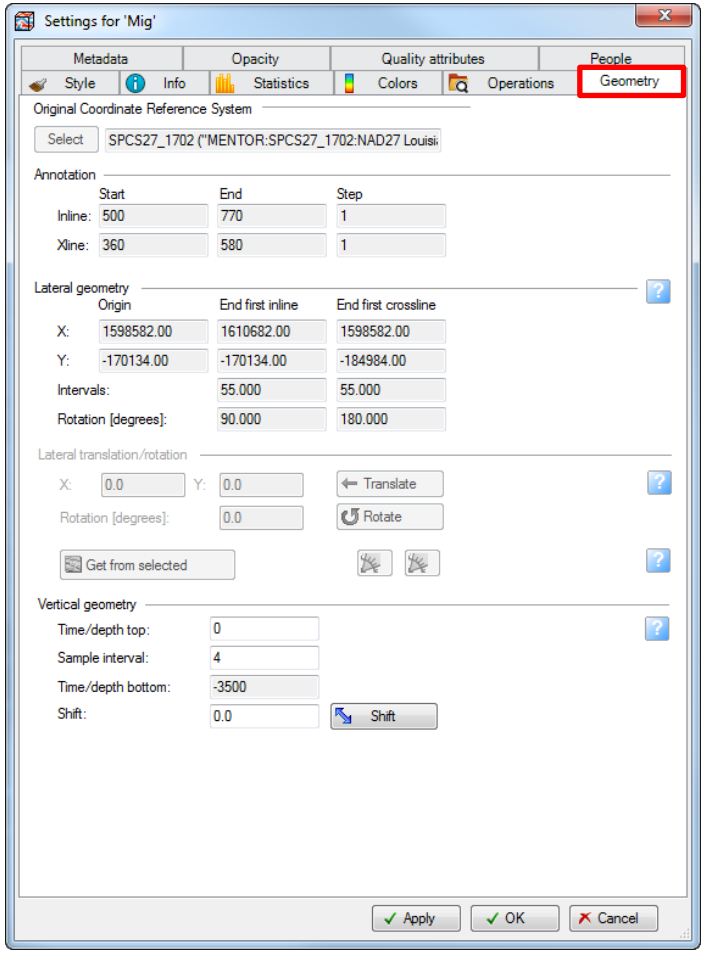




Geometry tab

Allows you to modify the geometry of the seismic survey, depending on how the survey was imported originally.

A vertical shift also can be applied to the seismic survey.



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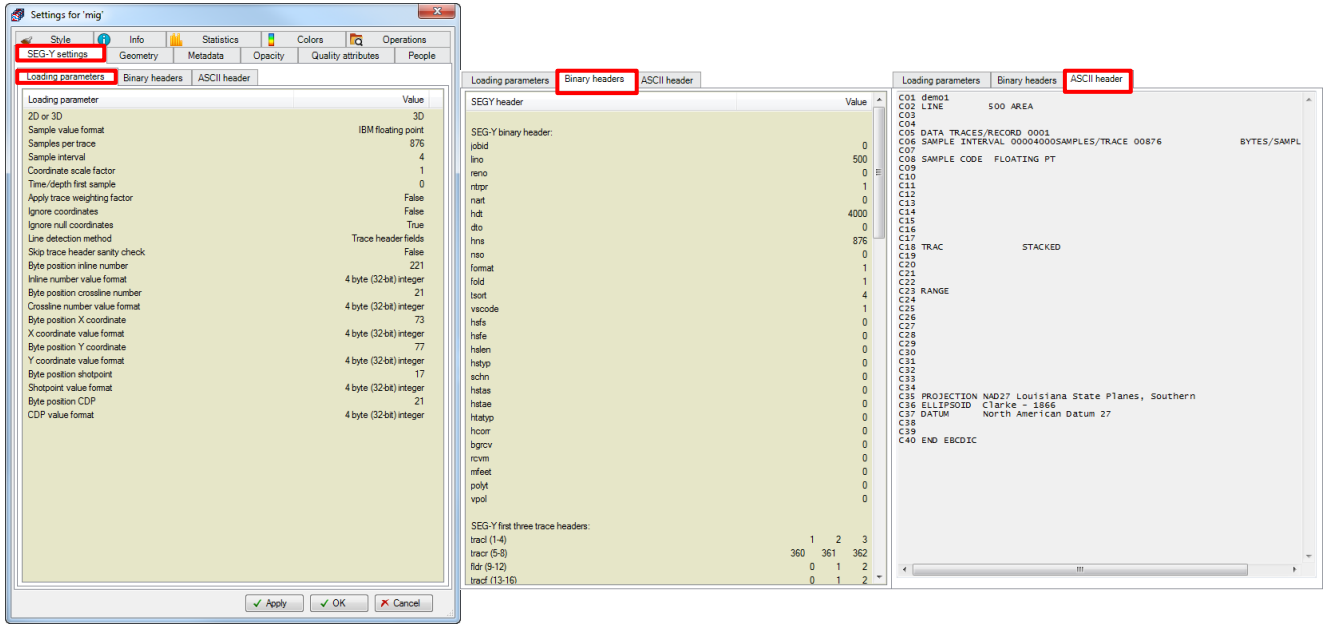
SEG-Y settings tab

- Includes a list of the loading parameters, as well as binary and ASCII (EBCDIC) headers.
- Not editable, but you can see the header of the seismic data.



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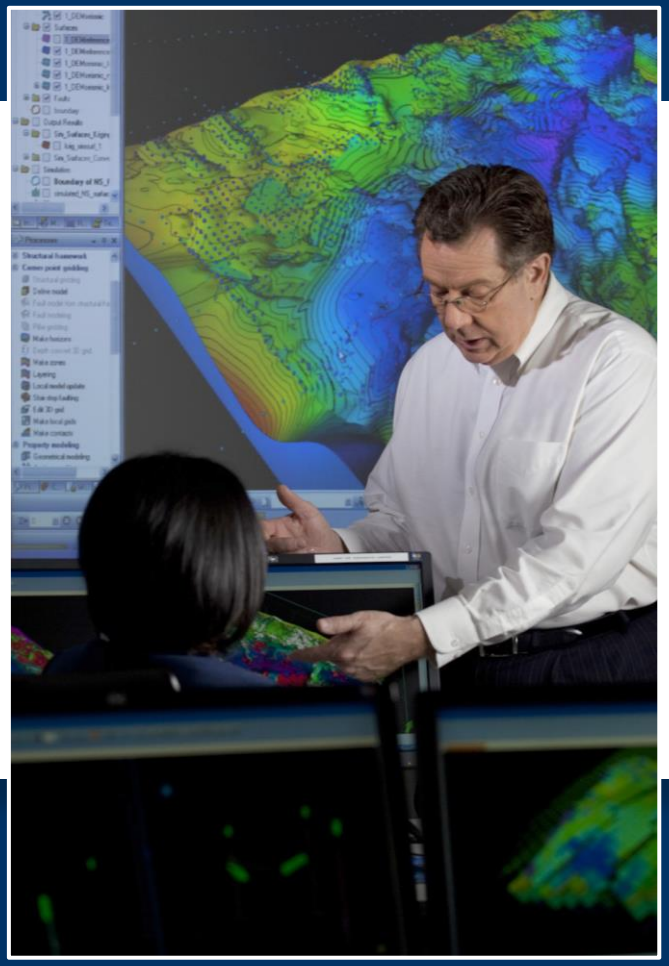
Lesson 3: Colors and templates



Templates

- Templates describe settings, such as the colors used to display data, the level of precision to be used when creating labels, and units used by the property.
- Templates are important for unit-dependent processes, such as estimating well logs using standard formulas or generating synthetic seismograms.
- It is important to assign the correct template to imported and generated data.

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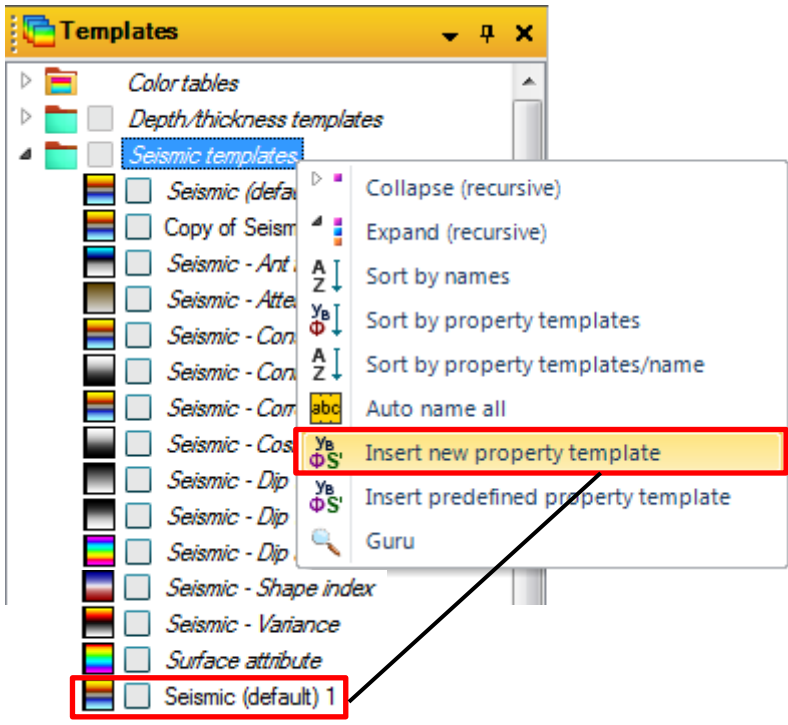
Assign templates (1)

1. To add a new template, n the **Templates** pane, right-click the folder into which you wish and click *Insert new property template*. A new template is added to the bottom of the folder.

2. Double-click the new template to open its **Settings**.



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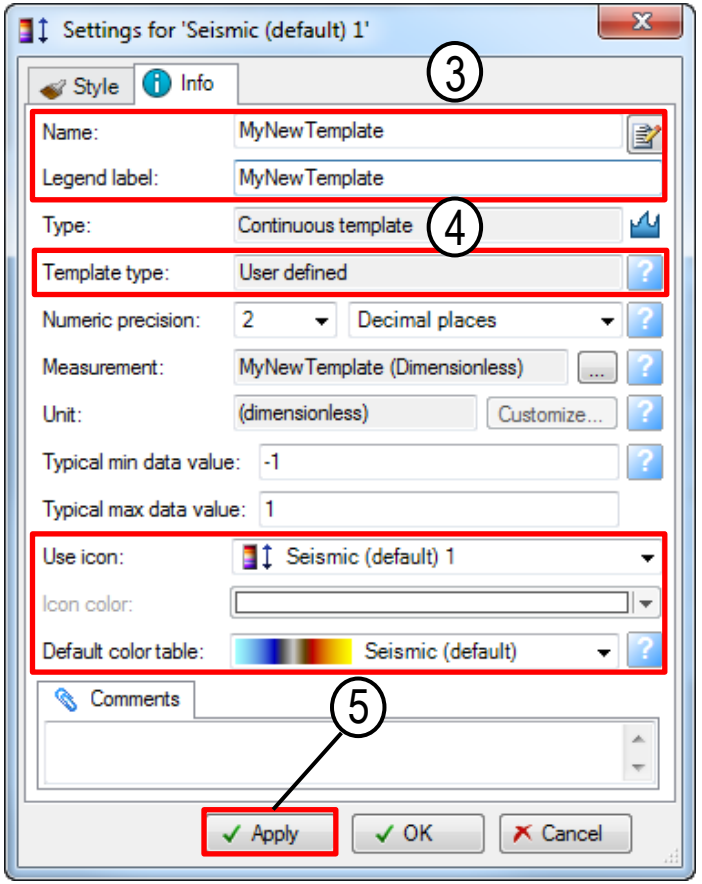
Assign templates (2)

3. Rename the template `MyNewTemplate`.
4. On the **Info** tab in the **Settings** dialog box, leave the Template type field set to the default, User defined.
5. Add your legend label, select which icon to use from the list, and click *Apply*.



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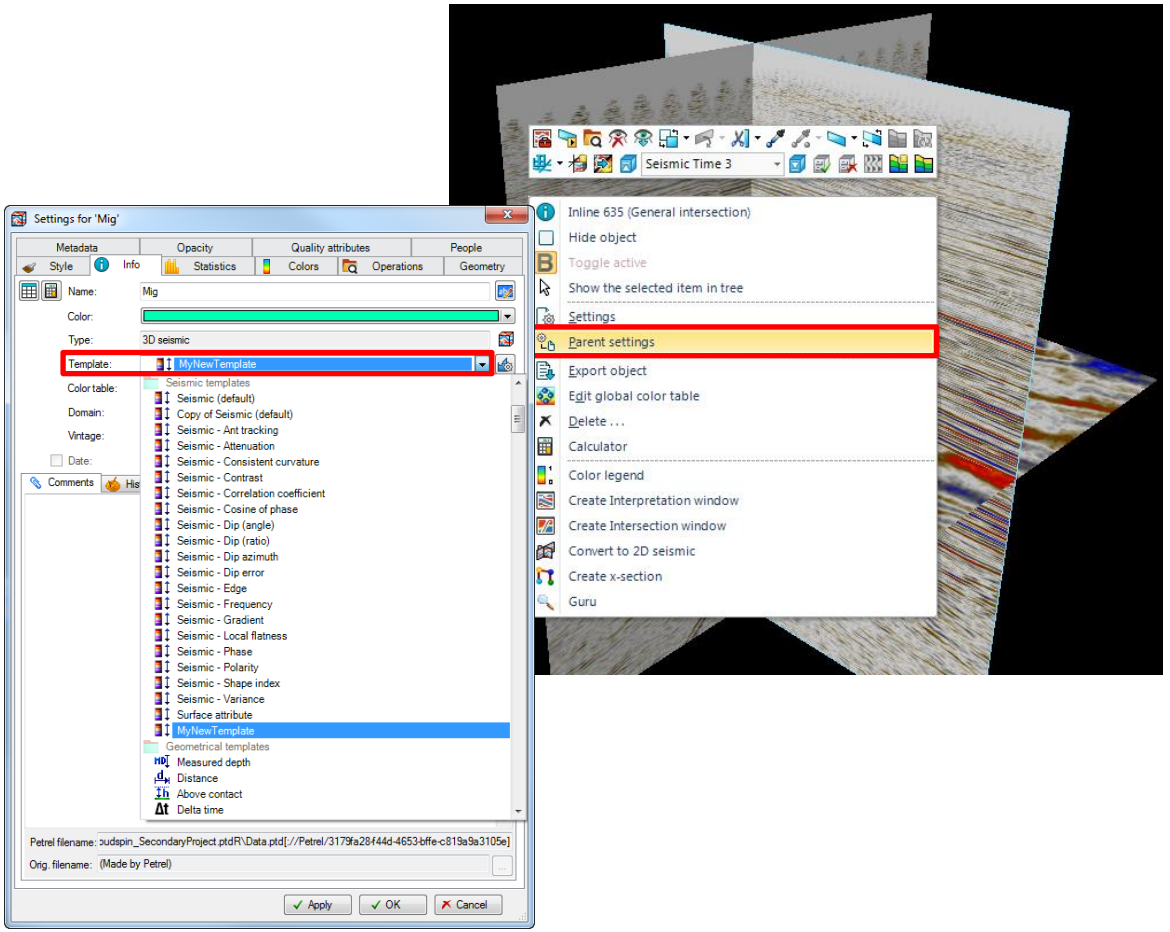
Assign templates (3)

6. To change the template of a seismic cube, right-click the cube in the display window and click *Parent settings* to open the **Settings** dialog box.

7. On the **Info** tab, use the *Template* list to change the template and click *Apply*.

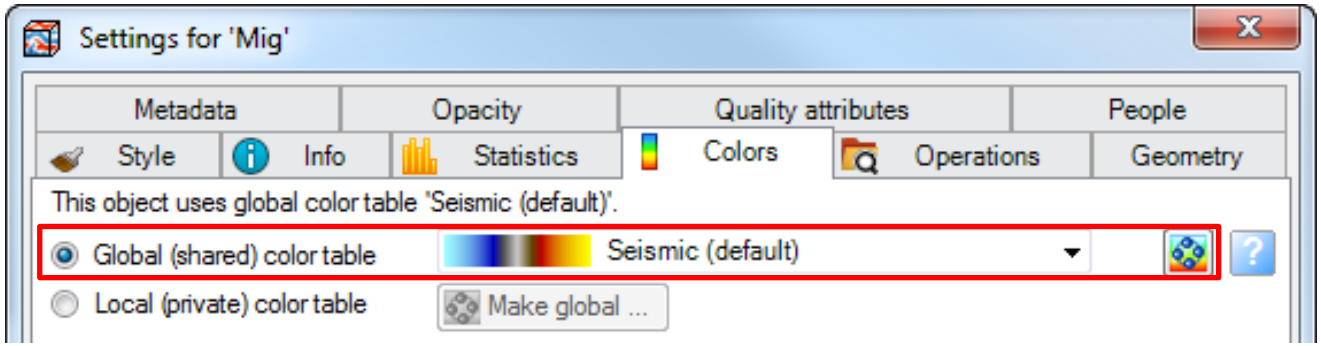


Color tables

Color tables now can be assigned to an individual object. This functionality allows you to change colors, assign colors to undefined values, set opacity, and, in the case of discrete color tables, set different patterns.

Global (shared) color table

1. In the **Settings** dialog box of a seismic cube, open the **Colors** tab.
2. Select *Global (shared) color table*.
3. Click  to make changes that affect all objects linked to this color table.



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Local (private) color table

1. In the **Settings** dialog box of a seismic cube, open the **Colors** tab.
2. Select the *Local (private) color table* option and for Min/max limits select Auto-scale color table to data in color table option.
   If you decide that your local edits should be applied globally, you can use *Make global* 

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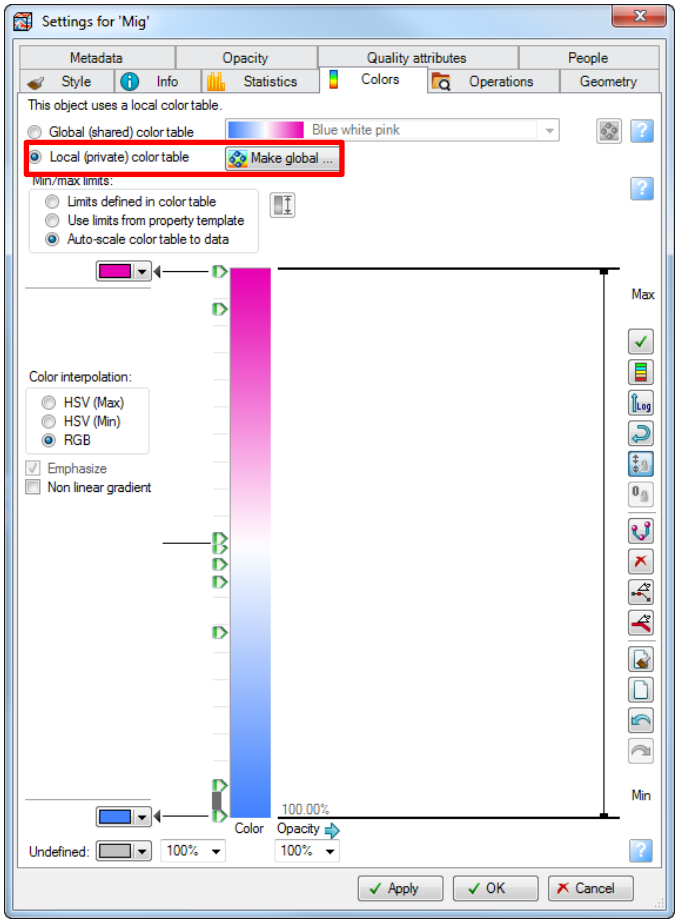

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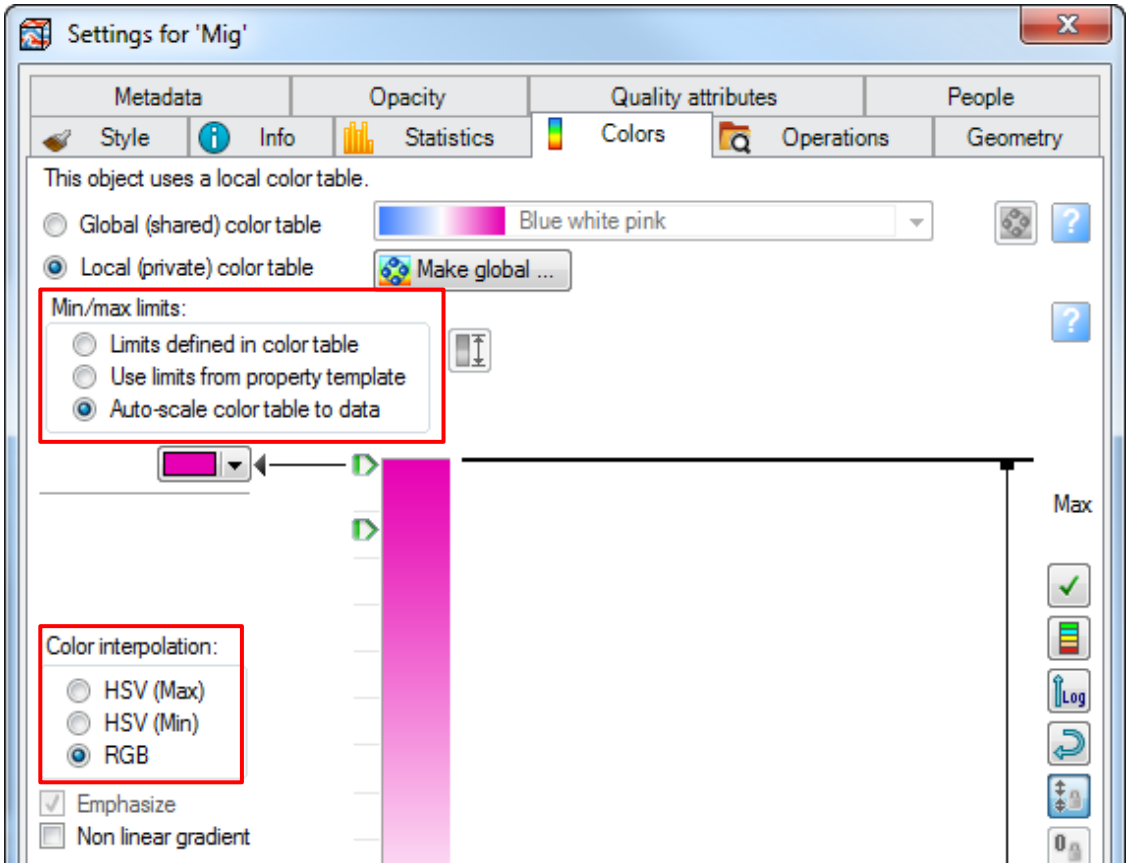
Color table options



Reset color table

Revert color table

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