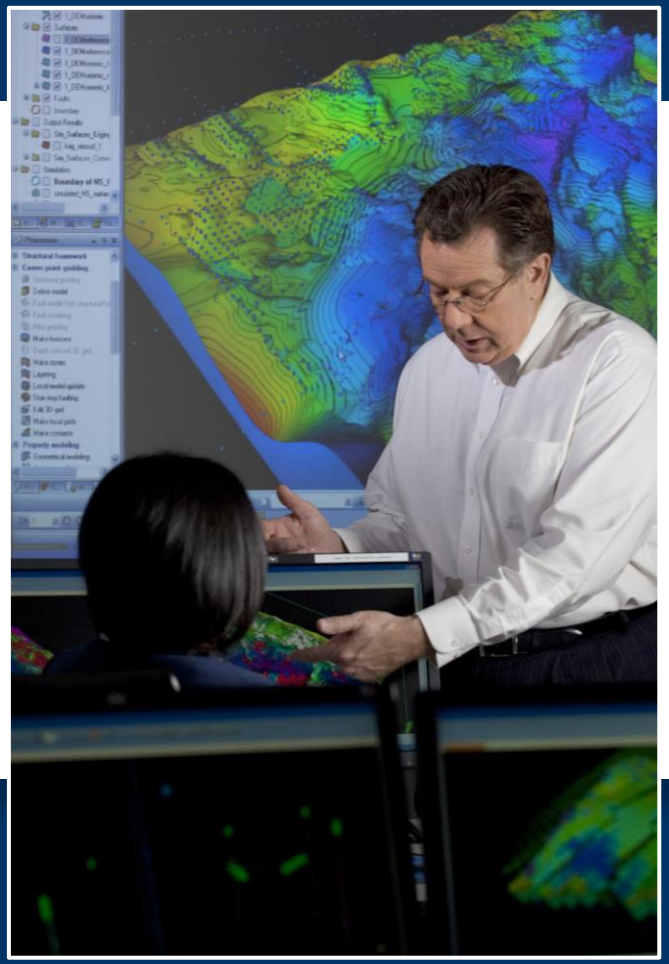
NEXT
A Schlumberger Company

Petrel Geophysics Module 3: Seismic data visualization

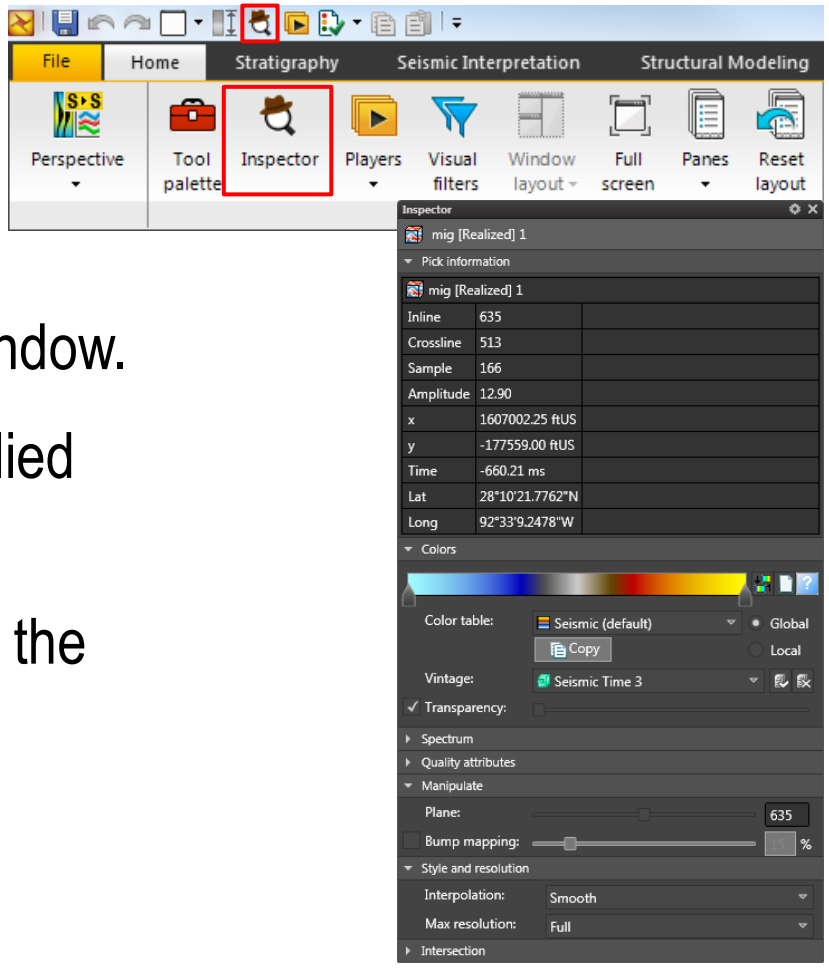
Schlumberger-Private

Lesson 1: Inspector



Inspector

- A floating window that provides a detailed view of the objects you click.
- Allows you to adjust style and other settings without leaving the display window.
- The controls in the **Inspector** are applied automatically.
- To launch **Inspector**, on the **Home**, in the **View** group, click *Inspector*.

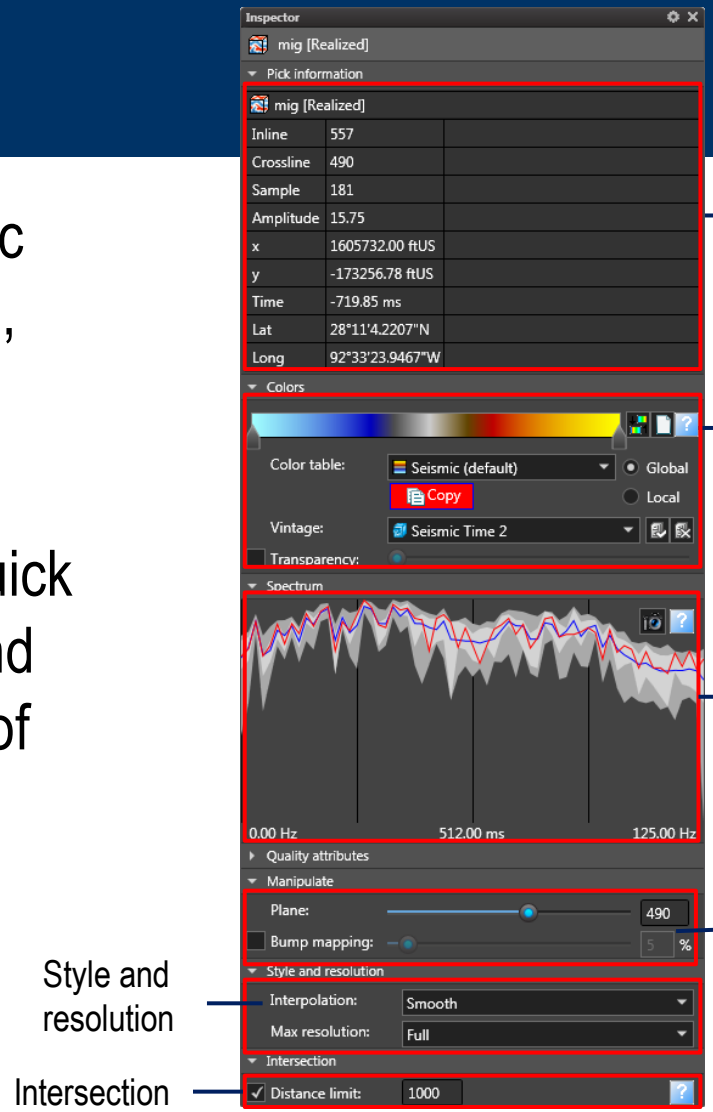


NEXT
A Schlumberger Company

Seismic Inspector

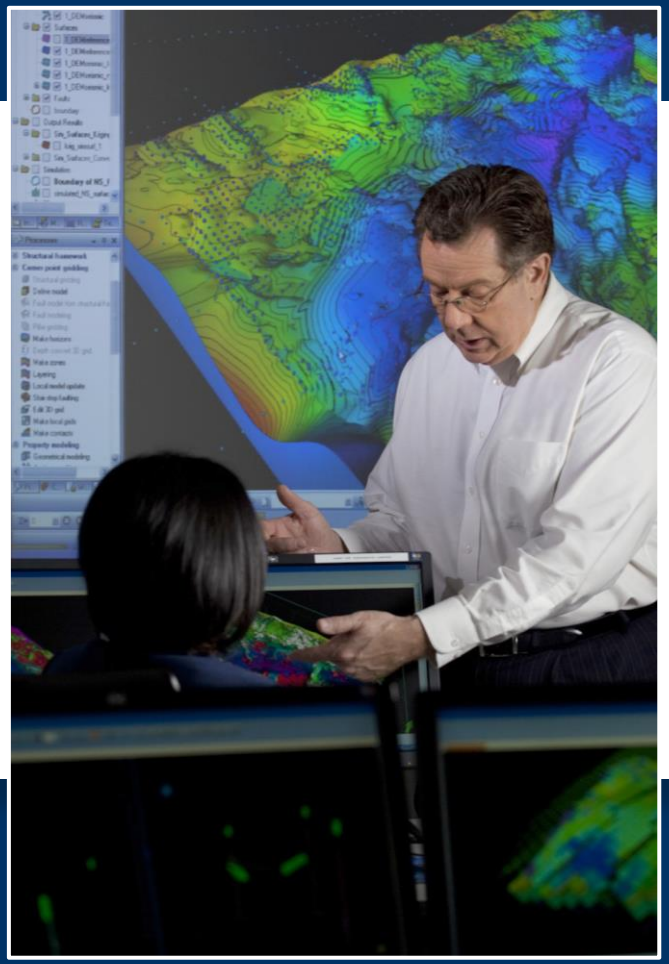
When you click *Select* on the seismic object (seismic line or the time slice), the Inspector is updated to Seismic.

The Seismic **Inspector** gives you quick access to the general information and more frequently used style settings of the selected seismic object.



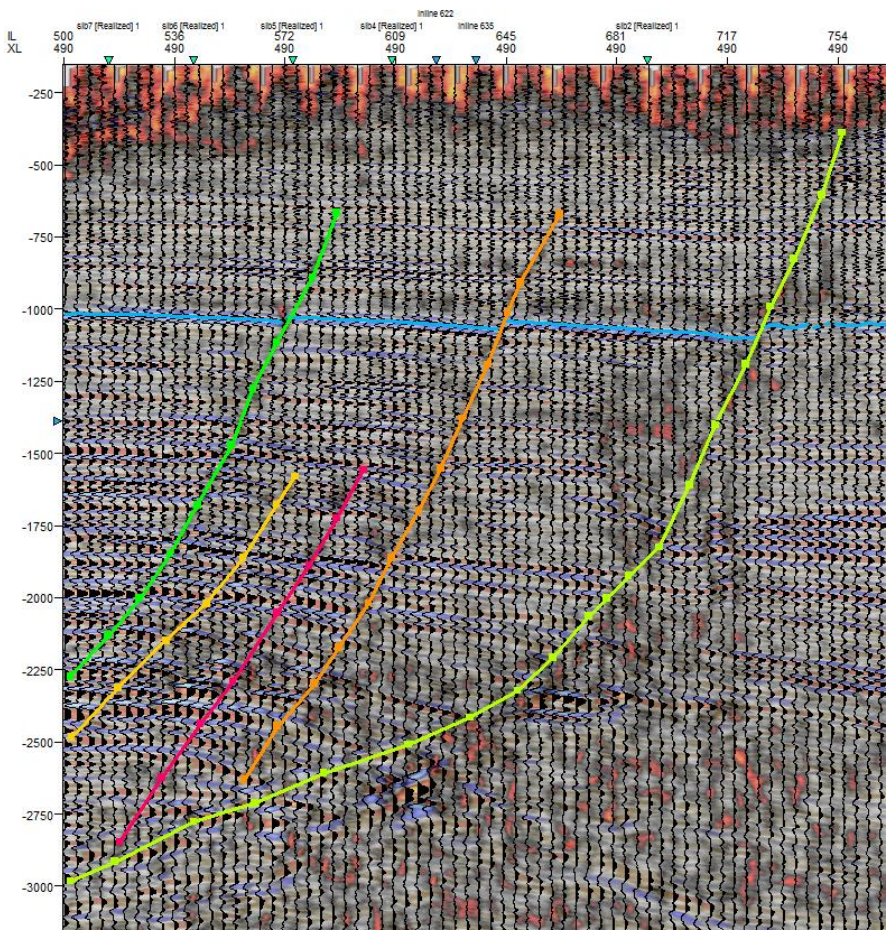
NEXT
A Schlumberger Company

Lesson 2: Seismic visualization



Display seismic trace data in Interpretation window (1)

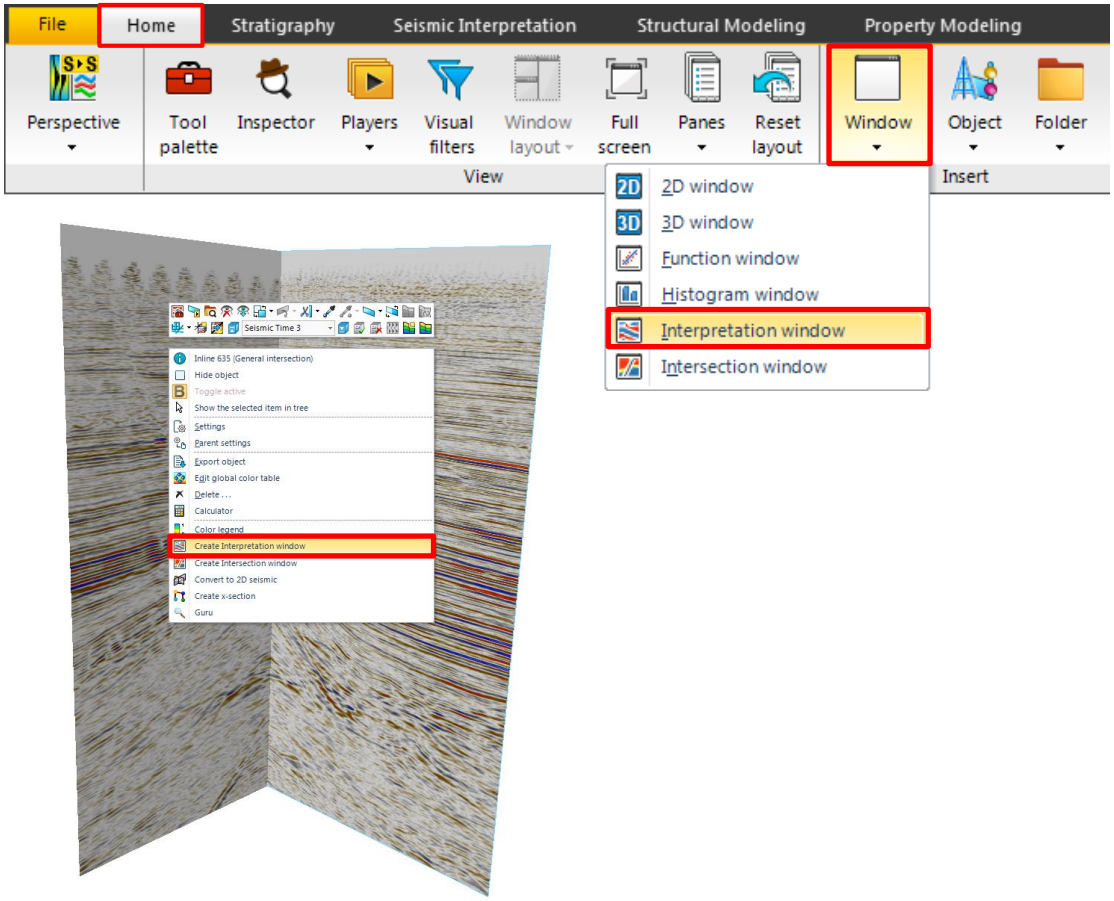
- **Interpretation** window is where most of the horizon and fault interpretation work are carried out.
- Seismic data can be displayed in **Interpretation**, **3D**, and **2D** windows.



NEXT
A Schlumberger Company

Display seismic trace data in Interpretation window (2)

1. To open an Interpretation window, on the **Home** tab, right-click seismic section.

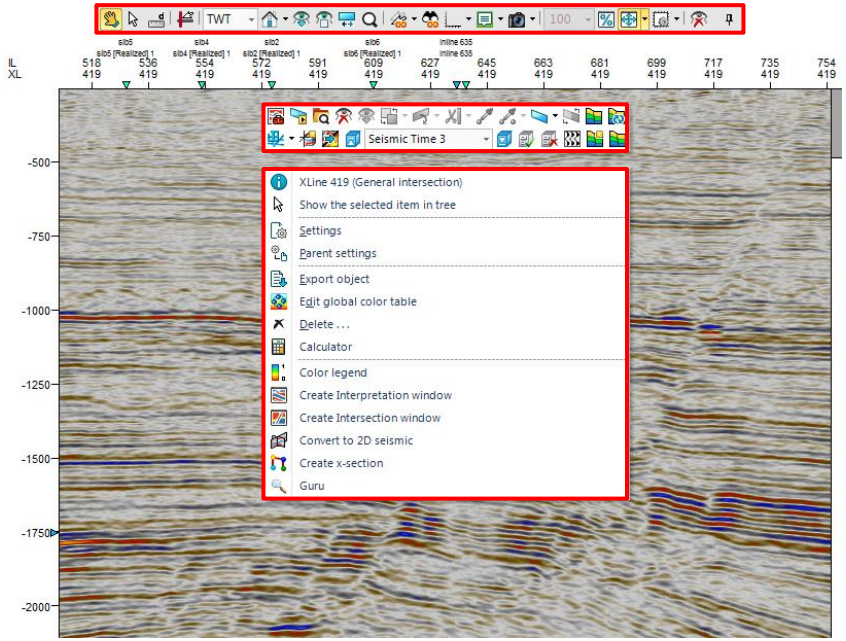


SLB-Private

NEXT
A Schlumberger Company

Display seismic trace data in Interpretation window (3)

2. Click *View mode*  . Move seismic data or zoom in/out using the mouse wheel.
3. Press Ctrl+Shift and hover the mouse in View mode adjusts the display scale for your section.
4. With **Inspector** open, click the seismic to read the information of the pick.
5. Right-click the seismic section to open the mini toolbar and the contextual menu related to the seismic.

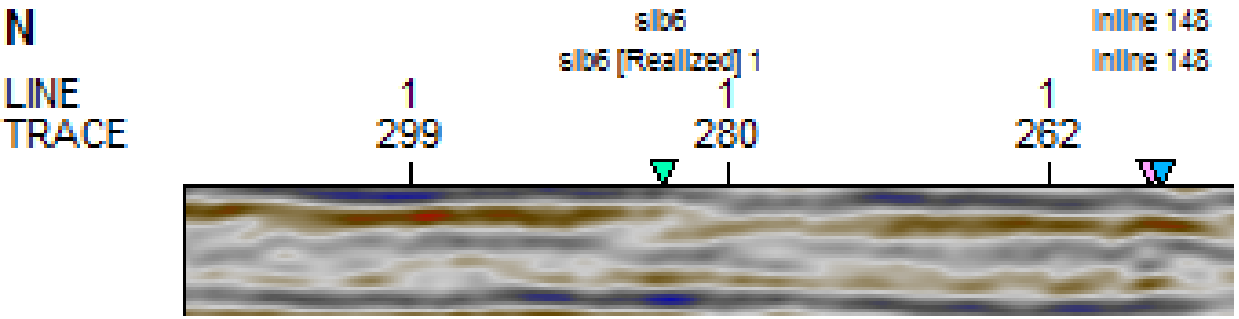


NEXT
A Schlumberger Company

Display seismic trace data in Interpretation window (4)

6. From the **Input** pane, display different IL/XL and 2D lines available in your project.

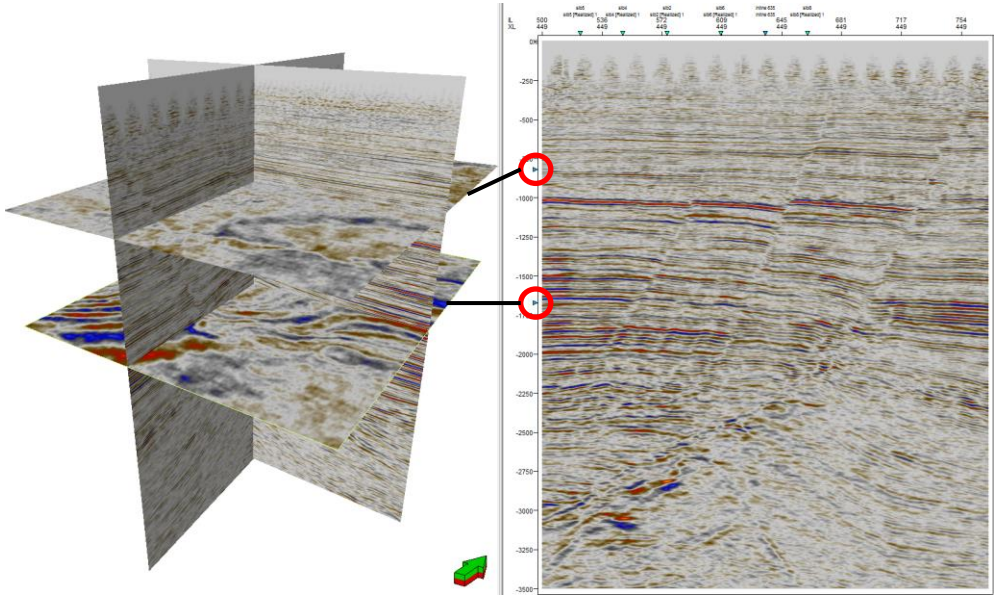
   The top section of the interpretation window displays the intersecting lines and cardinal direction annotations. SP and CDP also can be displayed.



Display seismic trace data in Interpretation window (5)

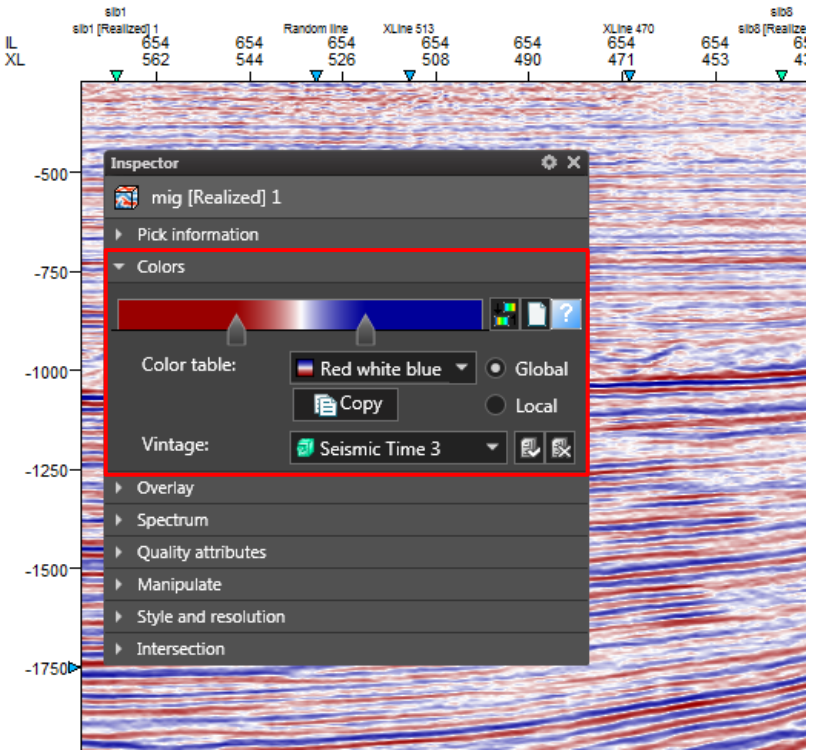
7. Flip the seismic line by using  in the **Window** toolbar.

8. You can see the location of time slices on your Interpretation window. Manipulate them interactively by sliding the triangles on the left hand side.



Display seismic trace data in Interpretation window (6)

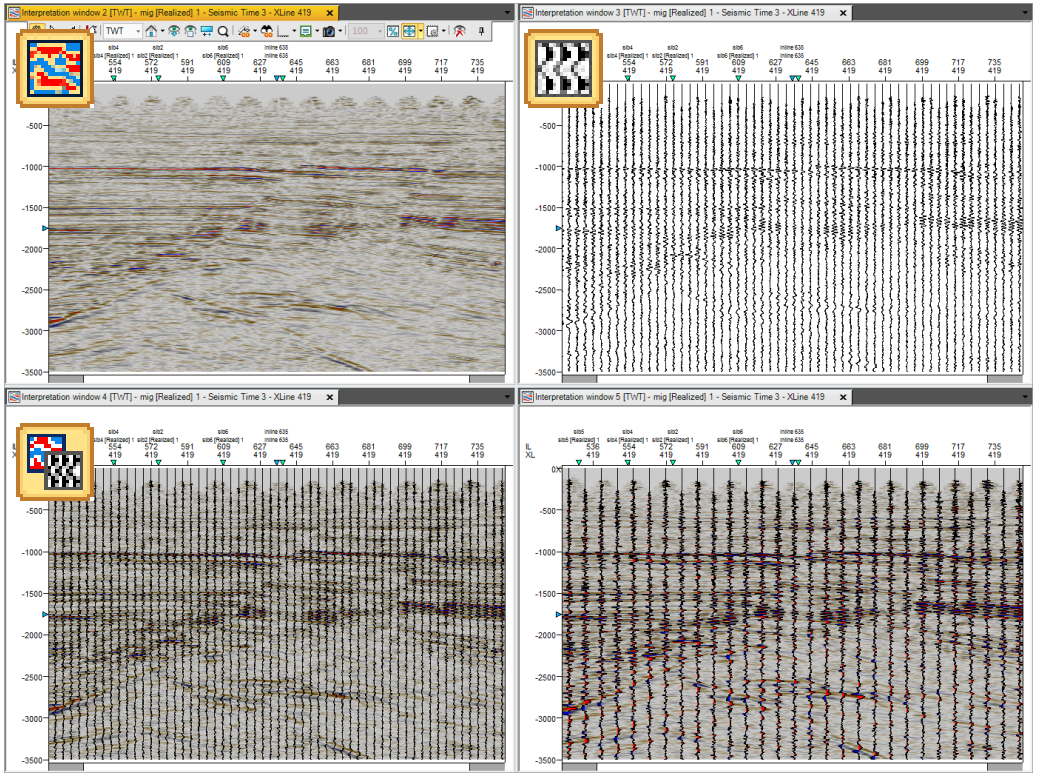
9. Change the color template of a seismic section using the **Inspector**  .
10. Here, you can increase the gain on the section, change the seismic template or select a different vintage to display.
11. In the **Overlay** subtab on the Inspector it is possible to overlay another seismic vintage on top of the displayed seismic section.



NEXT
A Schlumberger Company

Display seismic trace data in Interpretation window (7)

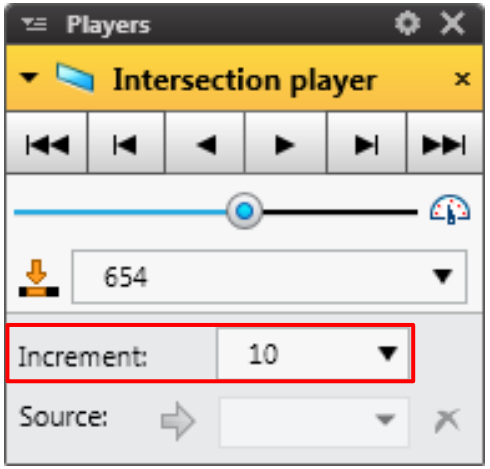
12. Right-click the section, and from the mini toolbar, click *Show wiggles only* to turn the wiggle and bitmap display on or off.



NEXT
A Schlumberger Company

Display seismic trace data in Interpretation window (8)

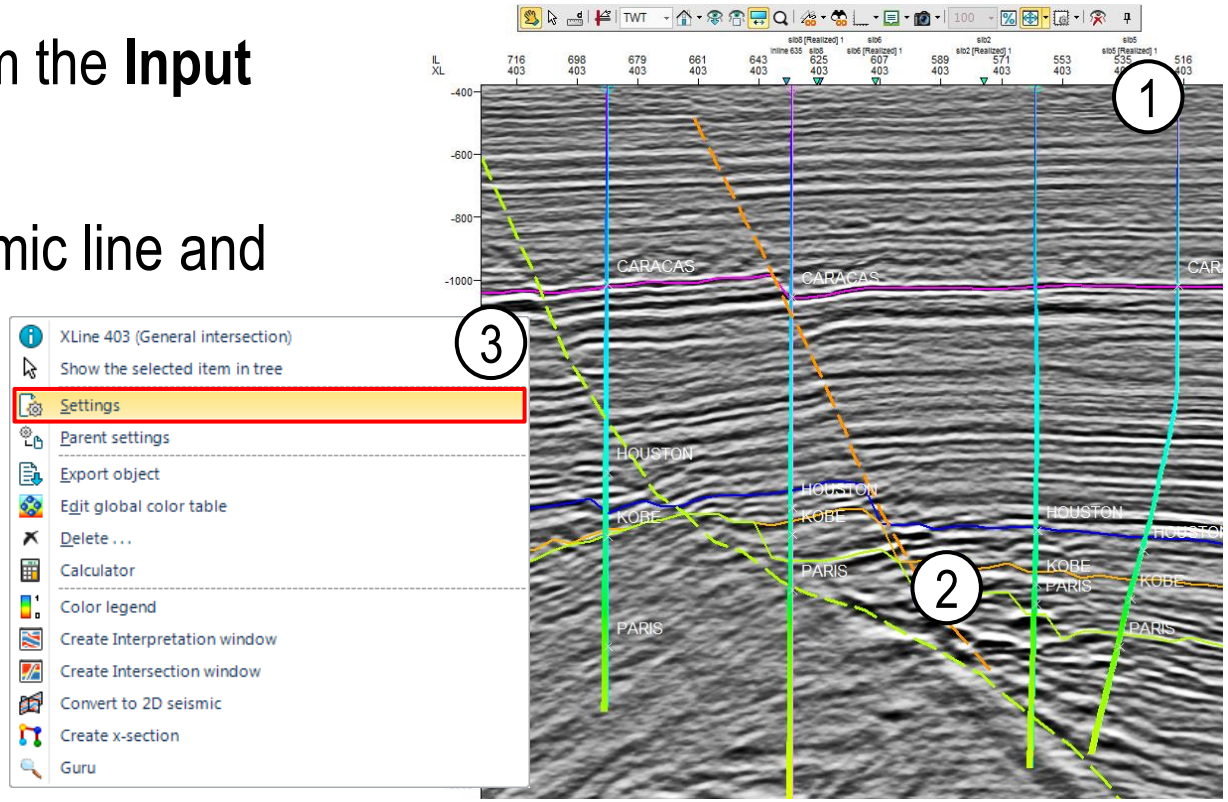
13. To display the next crossline or inline, press Page Up or Page Down on your keyboard.
14. Jump to a particular line by specifying the line number in the **Intersection player** or use the **Inspector**.
15. Specify the increment that you wish to use to jump to the next crossline or inline in the **Intersection player**.



NEXT
A Schlumberger Company

Post data in an Interpretation window (1)

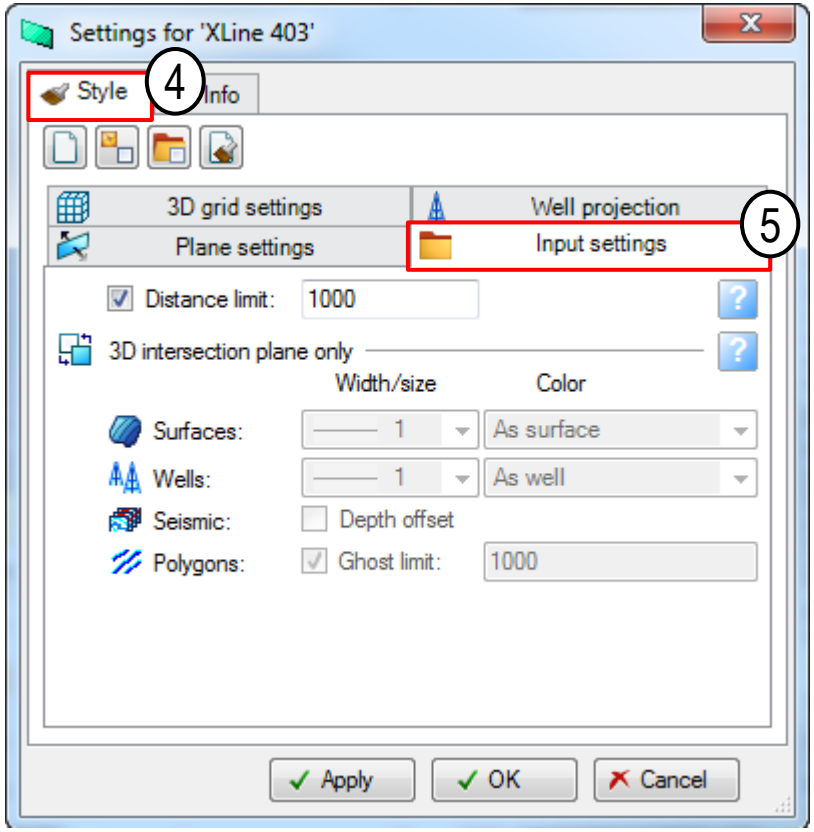
1. Open a new **Interpretation** window and display a seismic line.
2. Display objects from the **Input** or **Models** pane.
3. Right-click the seismic line and select *Settings*.



NEXT
A Schlumberger Company

Post data in an Interpretation window (2)

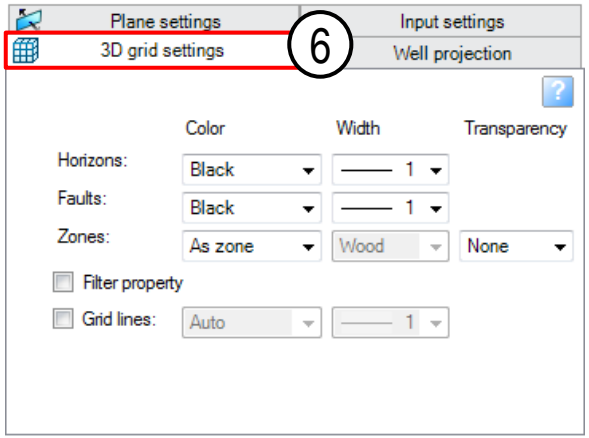
4. Change the display on the **Style** tab in the **Settings** dialog box for each object.
5. In the **Style** tab, **Input** settings subtab for the displayed seismic line, set a distance limit. Part of the wellbore and well tops beyond the limit are not posted.



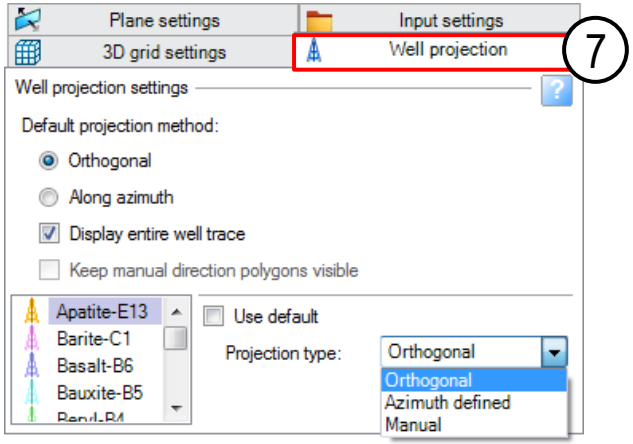
NEXT
A Schlumberger Company

Post data in an Interpretation window (3)

6. On the **3D grid settings** subtab, set the display style of the 3D grid data.



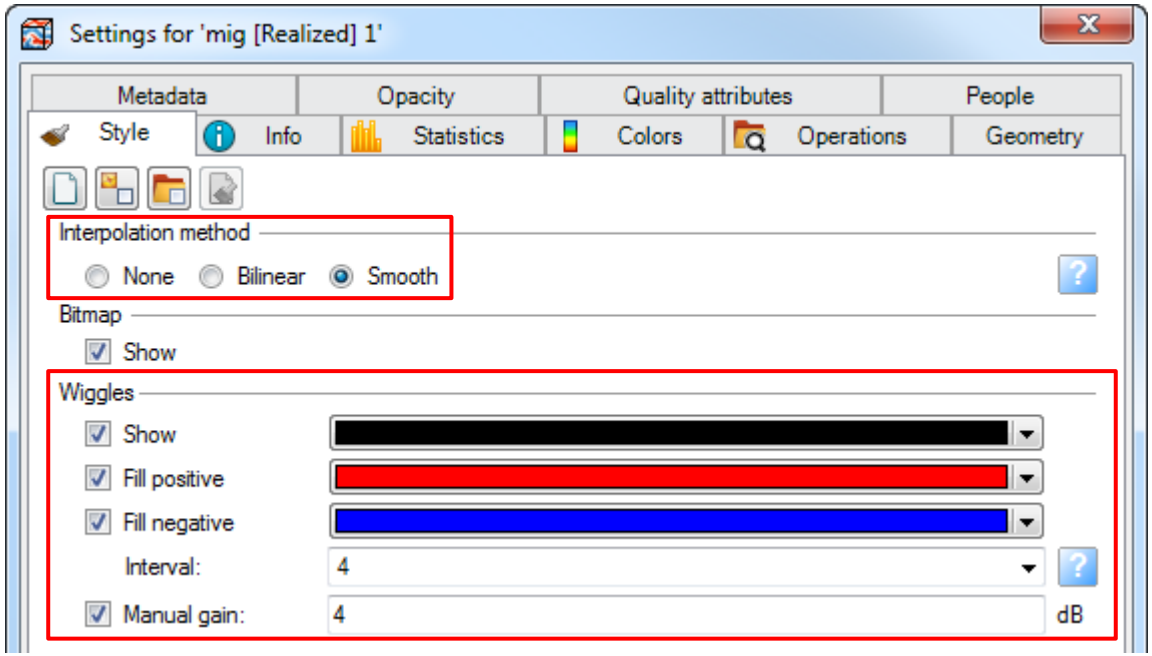
7. (Optional) Modify Well projection settings if required.



NEXT
A Schlumberger Company

Wiggle trace

Select the wiggles display from the **Style** tab in the **Settings** dialog box of a 3D cube or a 2D line.

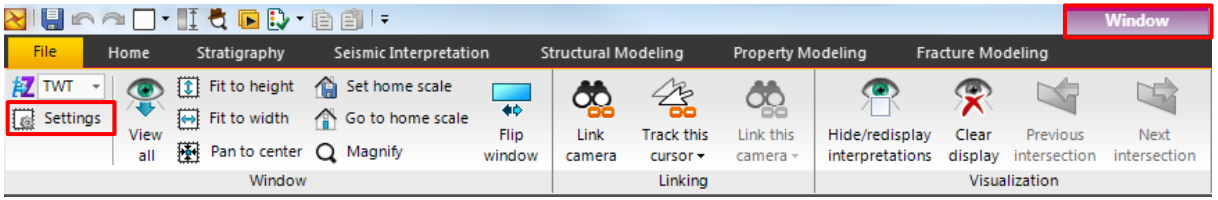


NEXT
A Schlumberger Company

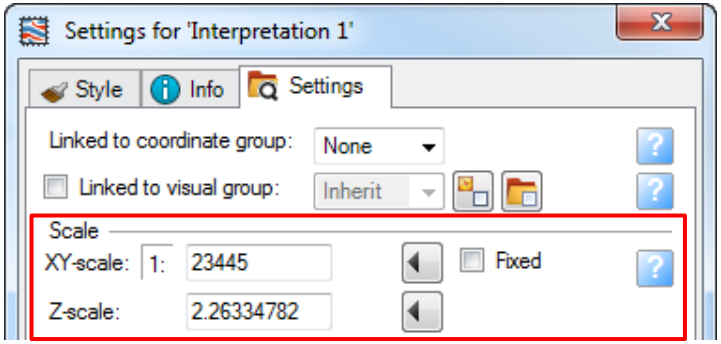
Seismic display scale for Interpretation window

Set the same display scale for all seismic lines in the **Interpretation** window.

1. With the Interpretation window active, on the **Window** tab, click *Settings*.

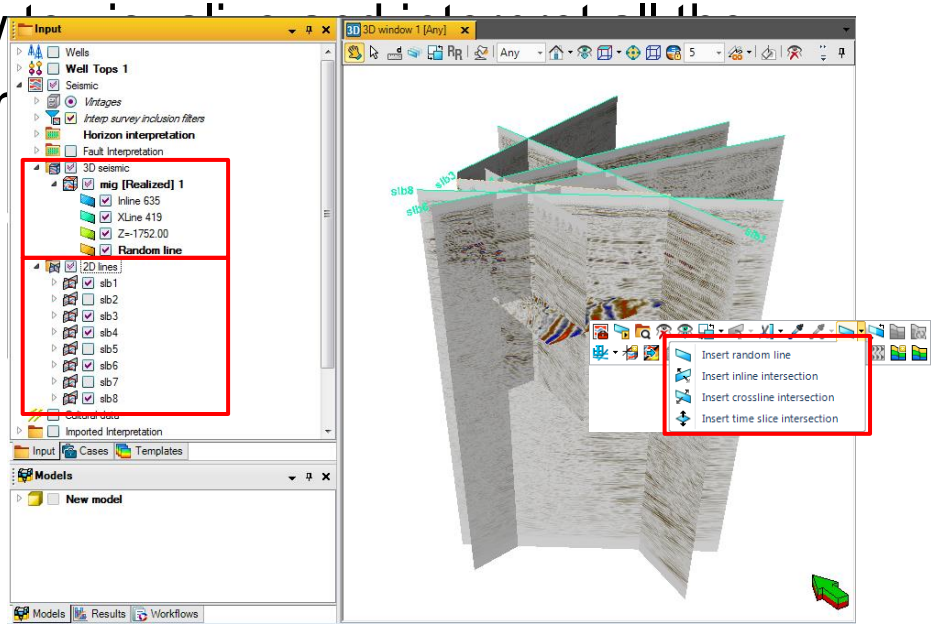


2. Choose the appropriate XY- and Z- scales for the trace display.



Display seismic data in a 3D window (1)

- 3D windows are a convenient way to visualize and interpret seismic data in any direction, and are useful tools for quality control of the interpretation.
- They provide unique opportunity to visualize and interpret all the different types of G&G data in or



NEXT
A Schlumberger Company

Display seismic data in 2D window (1)

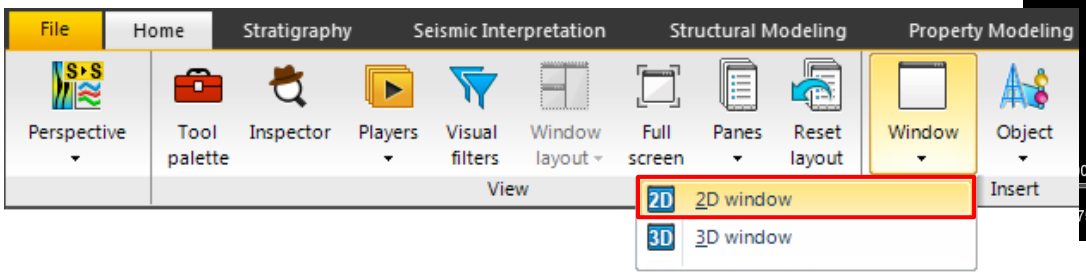
A 2D window serves as a basemap for seismic interpretation workflows. Within a 2D window, you can display

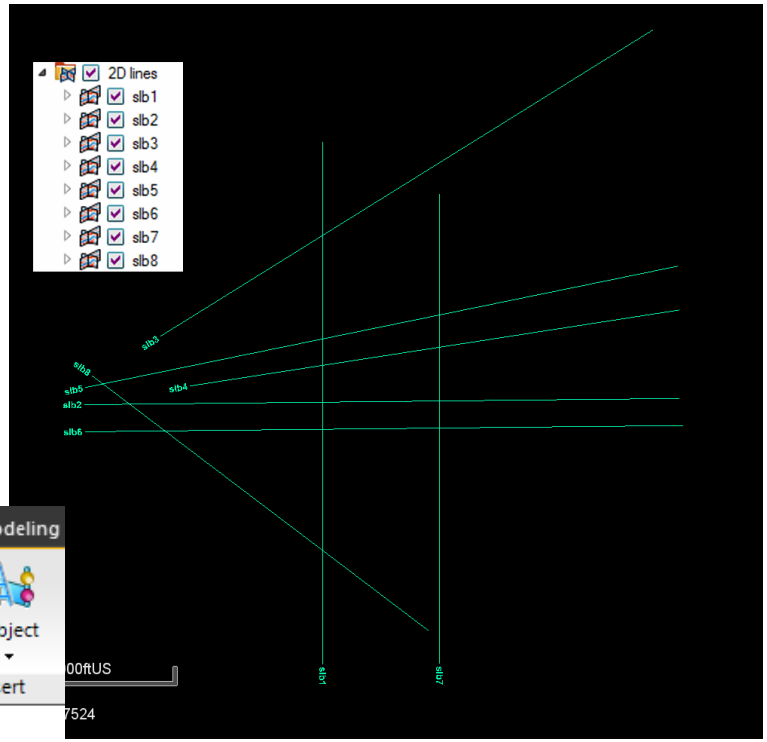
- The survey outline of 3D cube with annotations
- The outline of 2D seismic lines with annotations
- Selected inlines, crosslines, and time slices
- Horizons and faults
- Wells, surface, and cultural data

Display seismic data in 2D window (2)

1. On the **Home** tab, in the Insert group, click Window and select 2D window.

2. Click the **2D lines survey** folder in the **Input** pane.

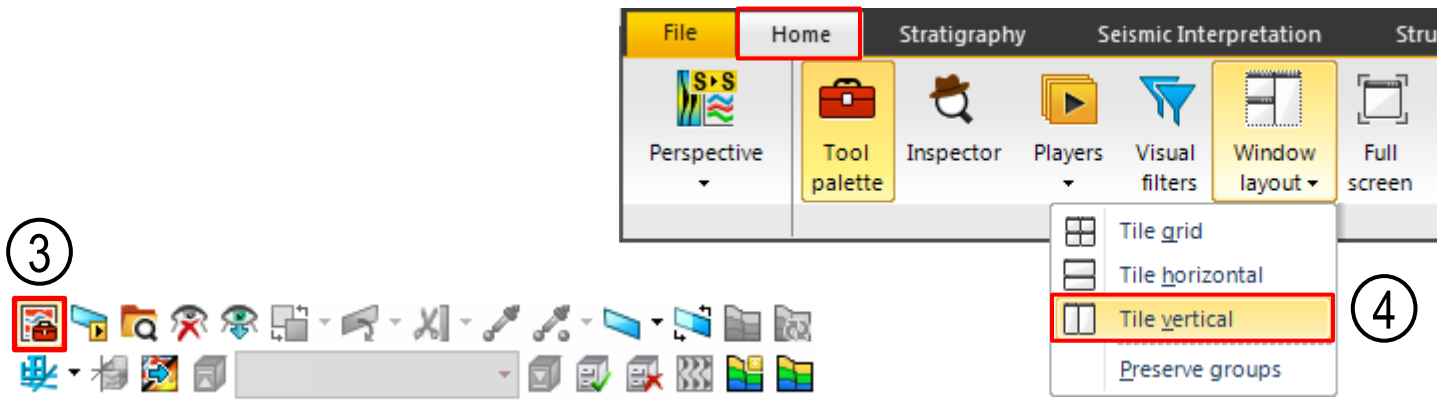




NEXT
A Schlumberger Company

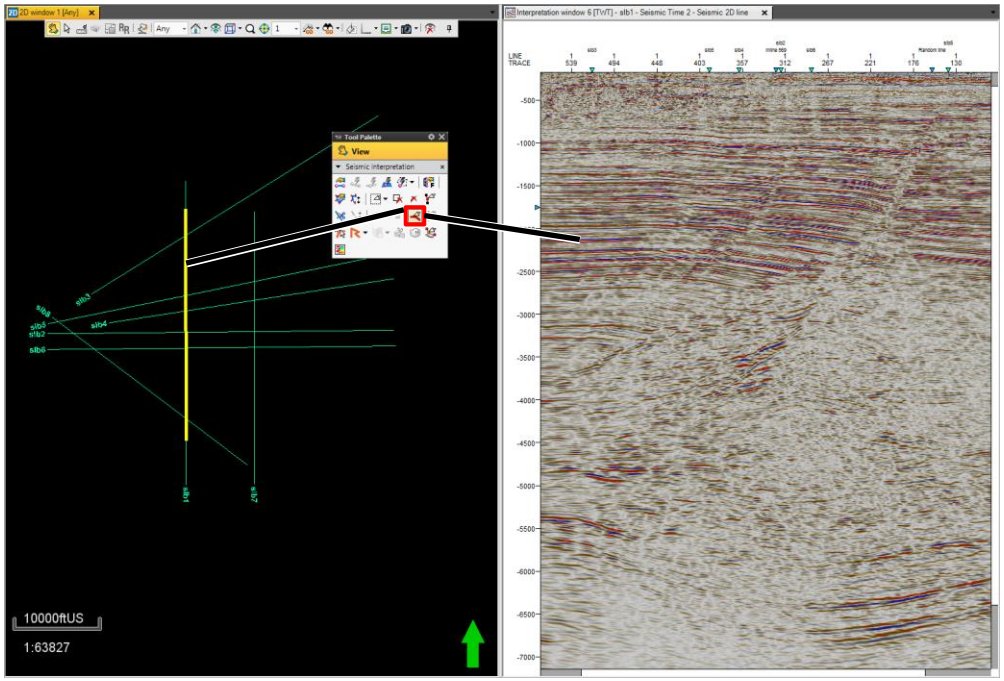
Display seismic data in 2D window (3)

3. Right-click the displayed seismic. From the mini toolbar, click *Tool palette*.
4. Open a new **Interpretation** window and tile both windows.



Display seismic data in 2D window (4)

5. On the **Tool Palette**, click *Basemap select*  and click a 2D line. The line opens in the **Interpretation** window.



NEXT
A Schlumberger Company

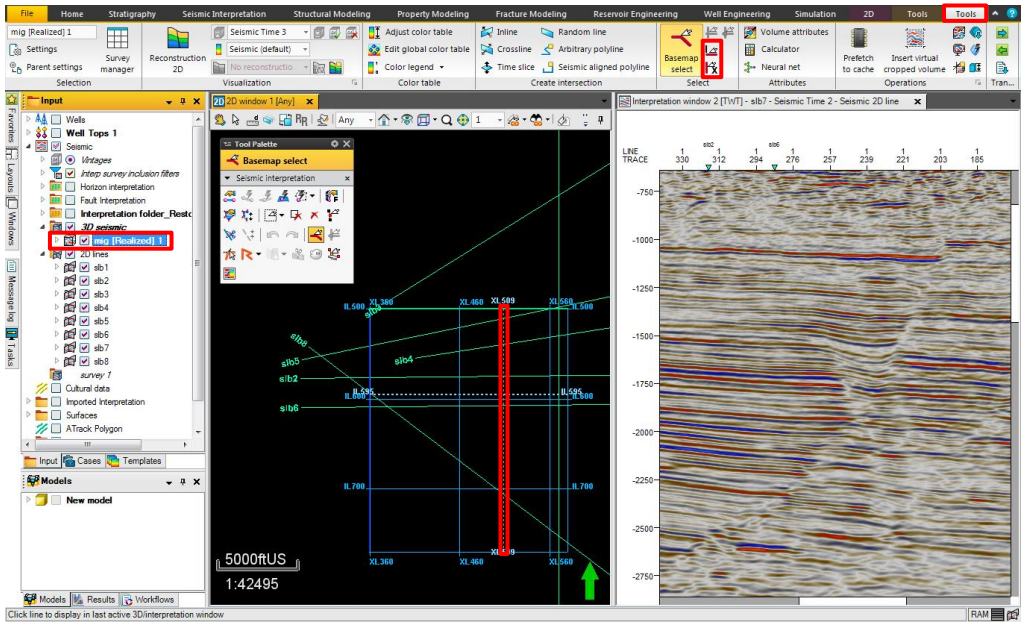
Display seismic data in 2D window (5)

To open an Inline or Xline, from a **2D** window:

6. Right-click an inline or crossline in a **2D** window.
7. On the **Seismic** tab, in the **Select** group, select *Select inline intersection* or *Select crossline intersection*.

   A dotted line appears in the survey outline.

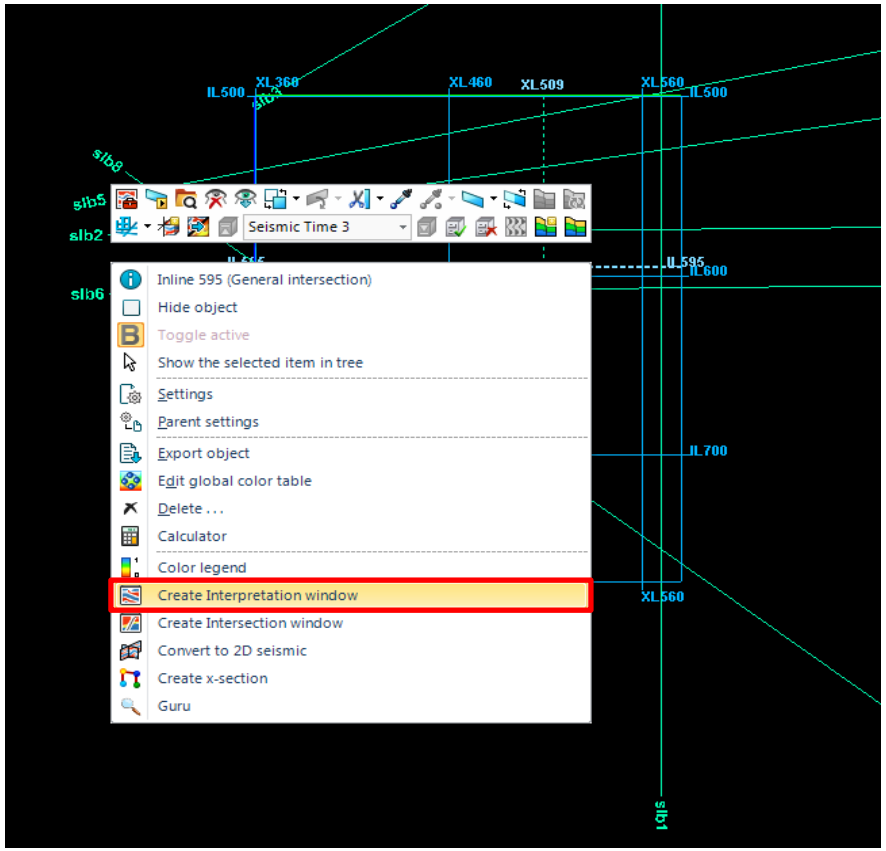
6. Double-click the dotted line to open the seismic line in the **Interpretation** window.



NEXT
A Schlumberger Company

Display seismic data in 2D window (6)

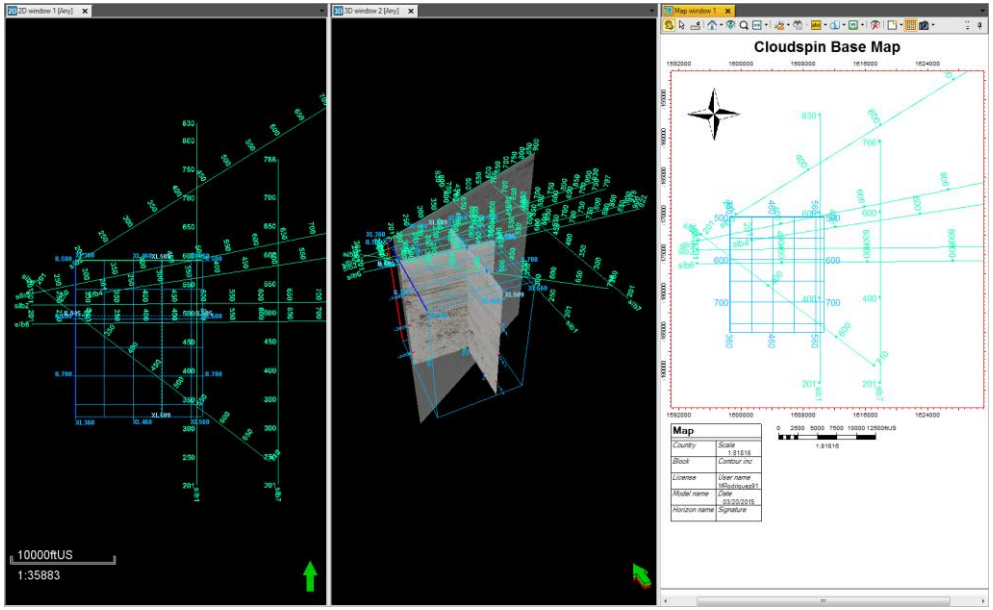
Right-click the displayed seismic in your **2D** window and click *interpretation window*.



NEXT
A Schlumberger Company

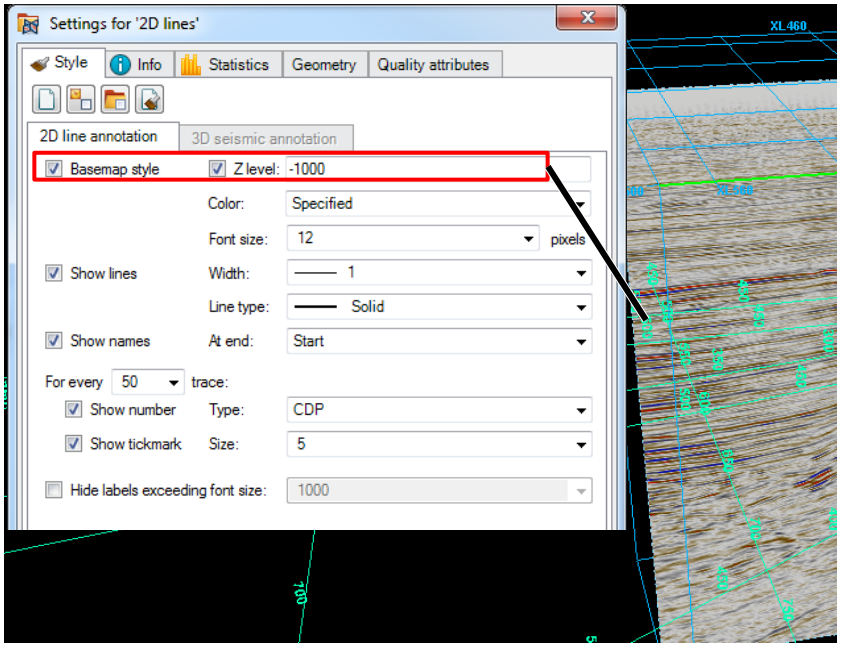
Base maps

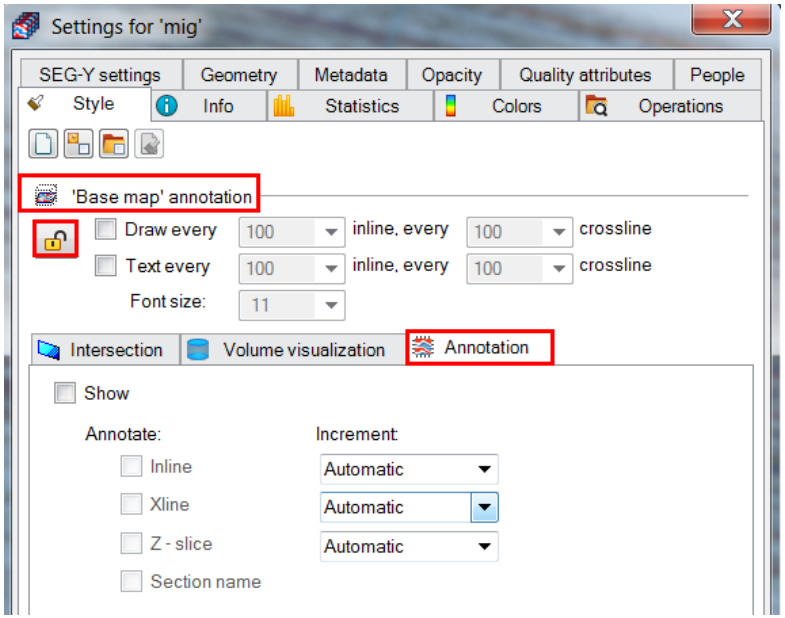
- Base maps are important aids during seismic interpretation.
- Seismic interpreters frequently navigate through base maps during their interpretation.
- You can display new seismic acquisition plans in the base map as culture data.



NEXT
A Schlumberger Company

Base map settings



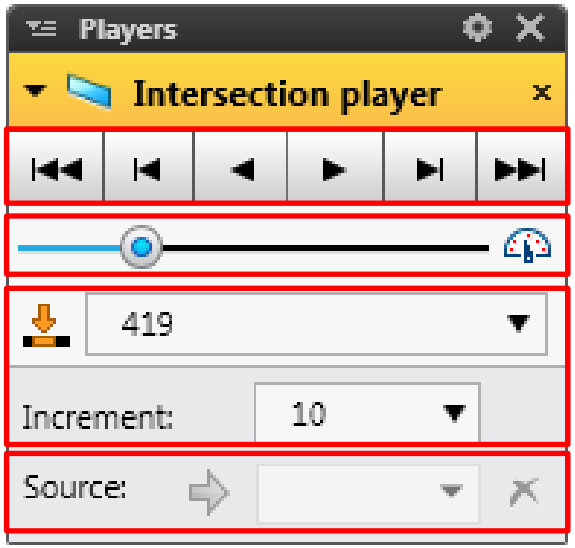


NEXT
A Schlumberger Company

Players

Action buttons

Numerical step indicator and selector



Slider for interactive panning

Additional objet-specific options

NEXT
A Schlumberger Company

Exercises