

# NEXT

A Schlumberger Company

## Petrel Geophysics Module10: Fault interpretation



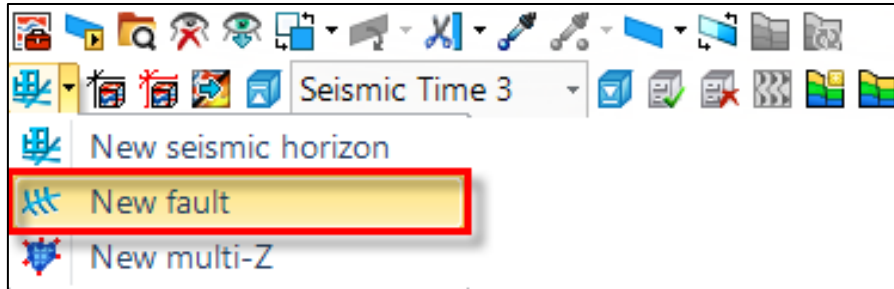
Schlumberger-Private

# Lesson 1: Fault interpretation in Petrel



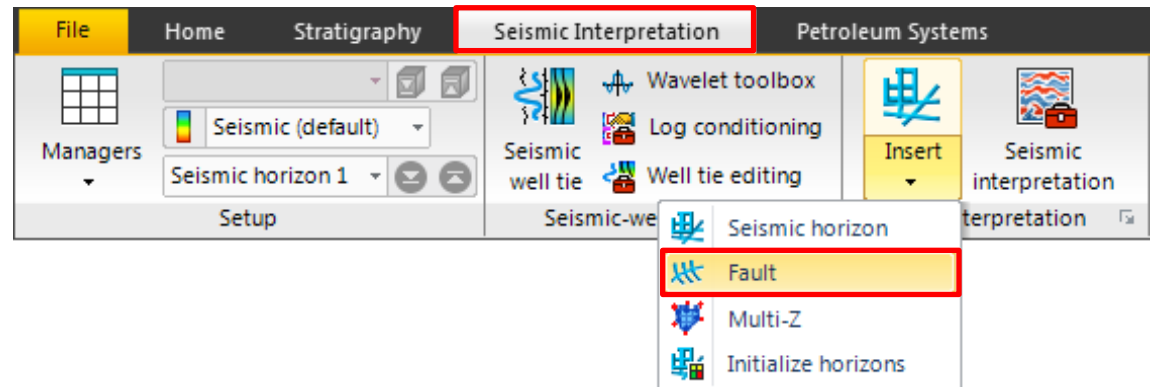
# Create a new fault

There are many ways to create or insert a new fault. Your choice depends on where you are in the application.



Mini toolbar

Seismic Interpretation tab

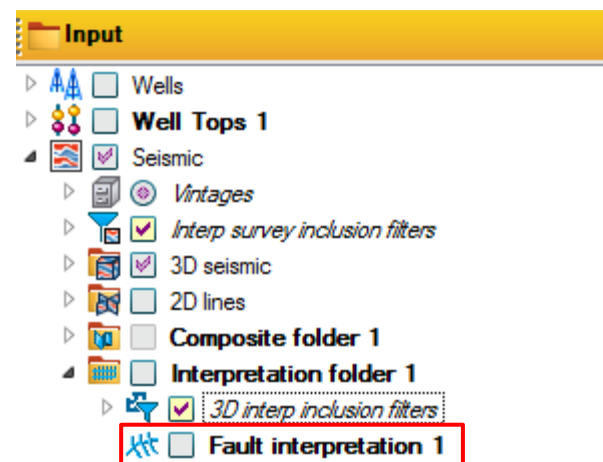
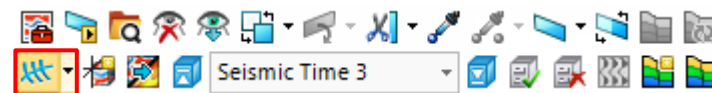


# Manual fault picking (1)

1. Open a new **Interpretation** window and display an intersection from of a seismic cube.
2. Right-click the Seismic section to show the mini toolbar and click *New fault* in the mini toolbar.

A new fault is created in the **Interpretation** folder in the **Input** pane.

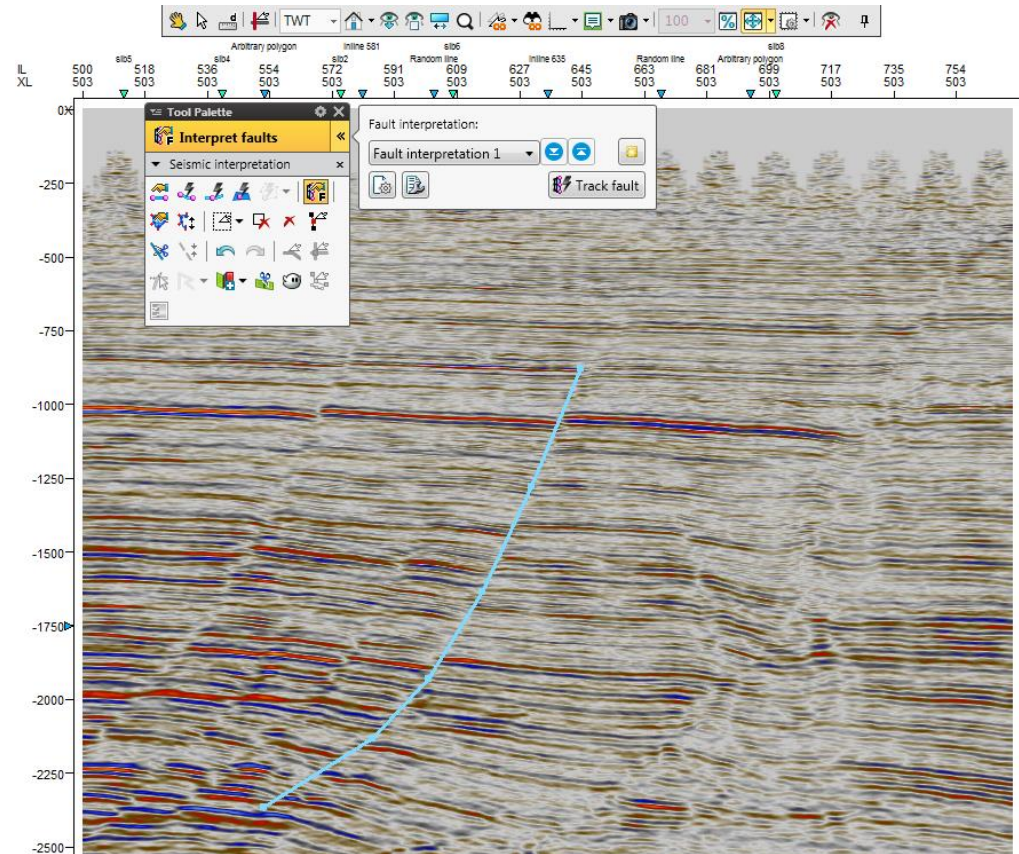
3. Click *Seismic interpretation Tool Palette*  in the mini toolbar.





# Manual fault picking (2)

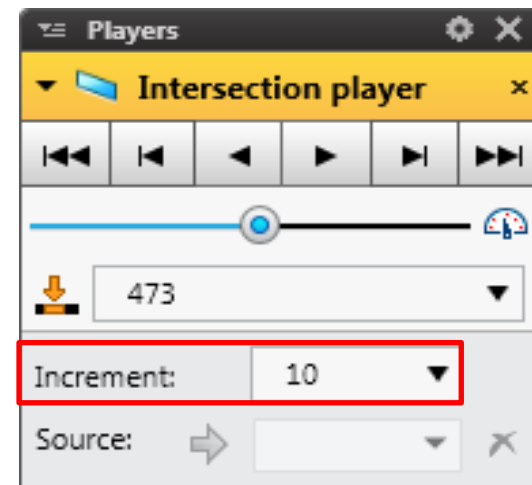
4. After you insert a new fault, start digitizing the fault.

5. Double-click or press N to complete the fault segment.



# Manual fault picking (3)

6. Click *Intersection player*  from the mini toolbar.
7. In the **Intersection player**, change the increment.
8. Activate the window, and press Page Up and Page Down to jump lines using the increment defined in your intersection player.
9. Click *Interpret faults*  in the mini toolbar or press F to continue the interpretation.

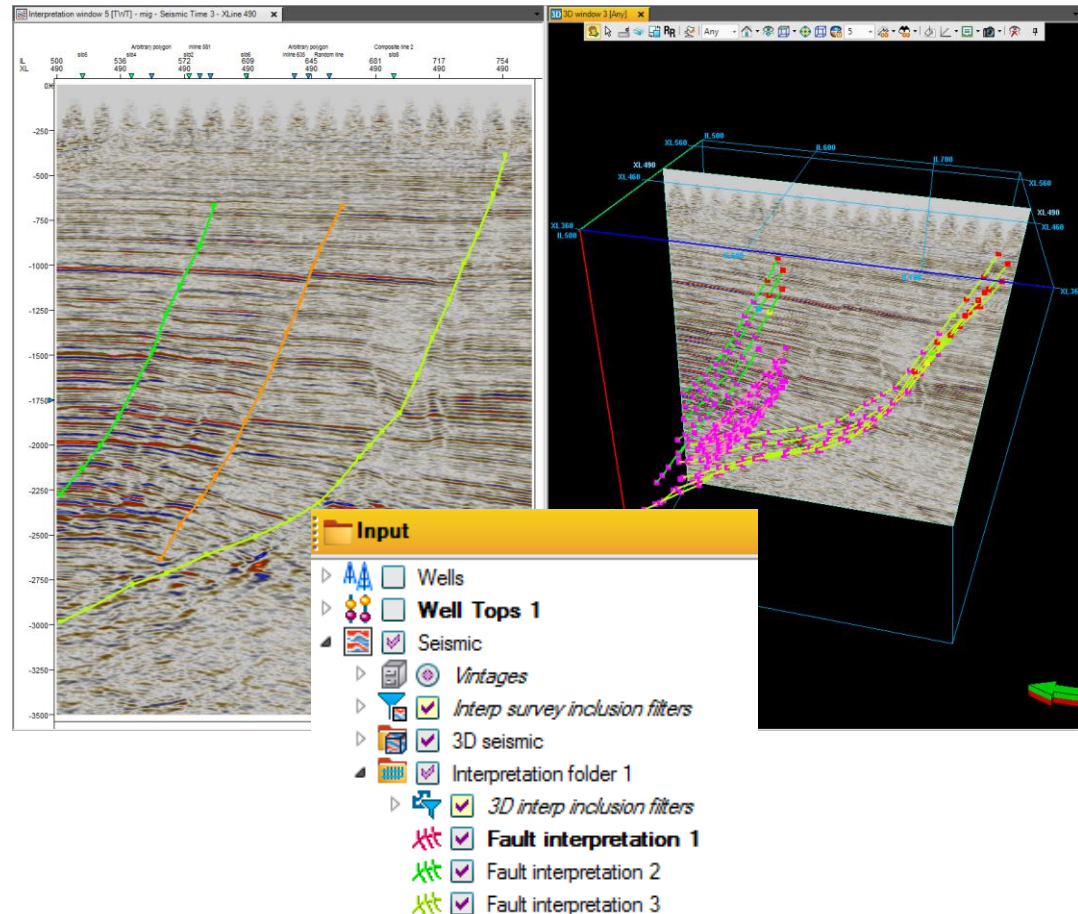






# Manual fault picking (4)

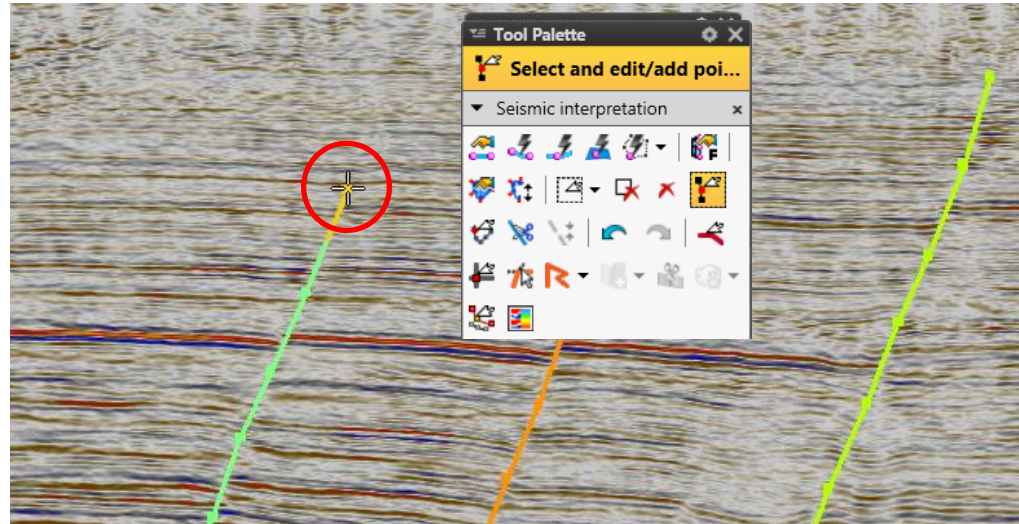
10. Add as many new faults as you want, and digitize across the seismic data.

All inserted faults are saved in the default **Interpretation** folder in the Input pane.



# Edit a fault segment (2)

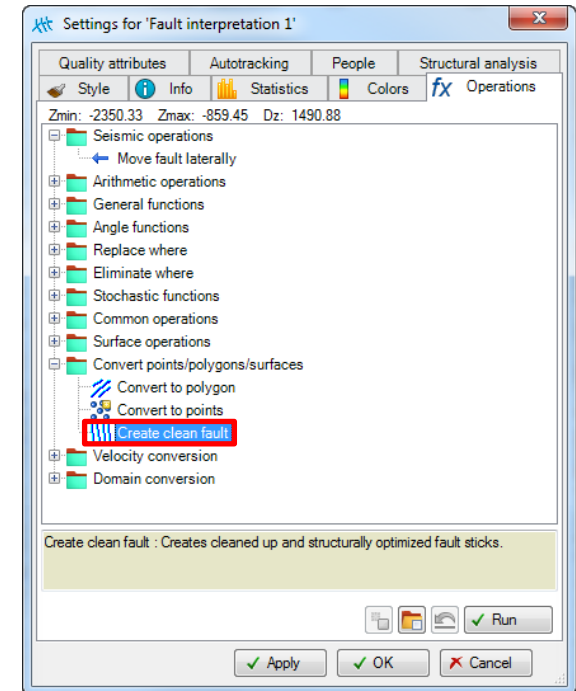
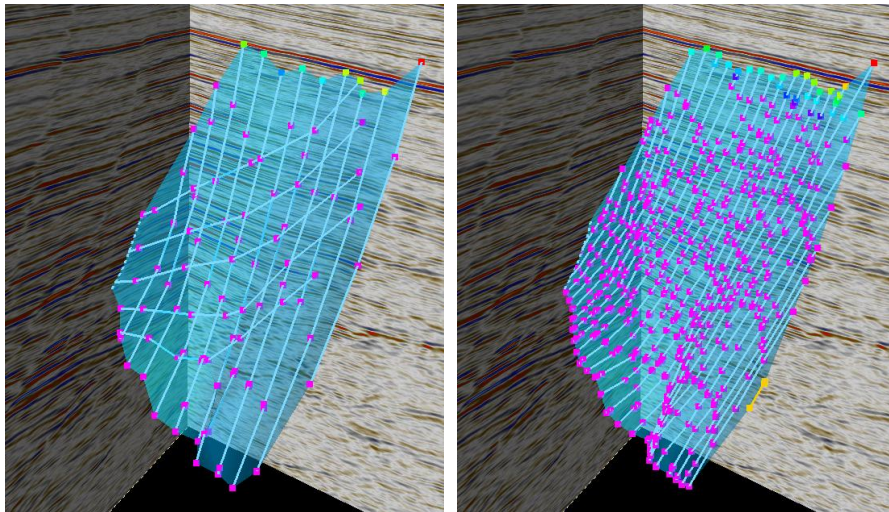
1. In the **Window** toolbar, click *Select [P]*  mode and click the desired fault.
2. To edit a fault segment, go to the **Seismic interpretation Tool Palette** and click *Select and edit/add points* .
3. Move the points on the fault or add new points to the fault segment to accurately mark the fault geometry.





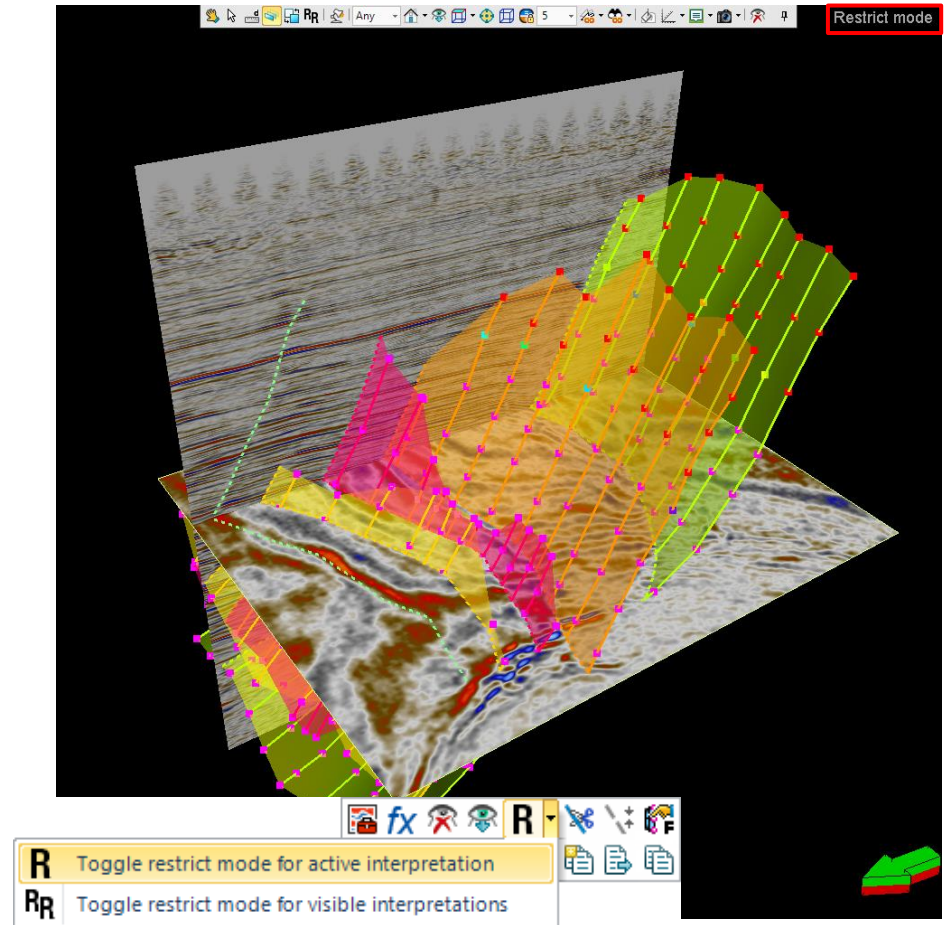
# Clean faults

1. On the **Operations** tab in the **Settings for Fault interpretation** window, expand **Convert points/polygons/surfaces**.
2. Select *Create clean fault*.
3. Click *Run*.



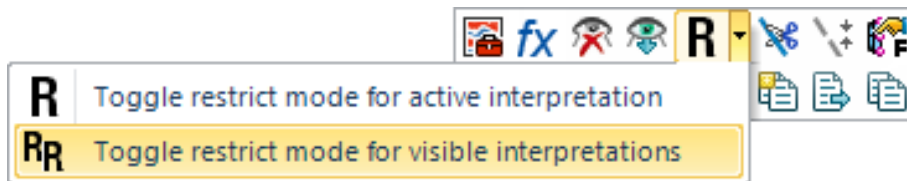
# Restrict mode (1)

1. Display interpretations and seismic lines in a **3D window**.
2. Right-click one fault and in the mini toolbar, click *Restrict mode* and click *Toggle restrict mode for active interpretation*.

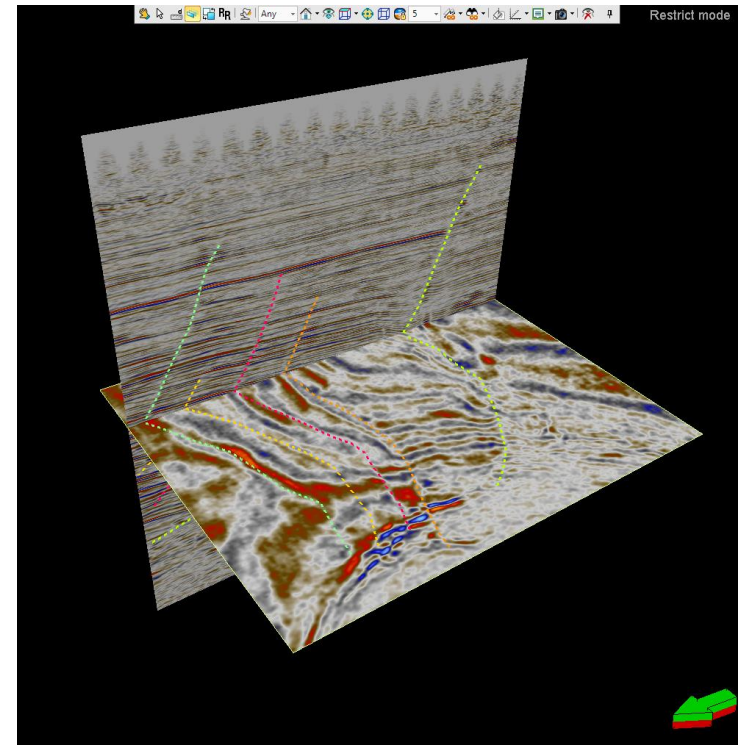


# Restrict mode (2)

3. Select *Toggle restrict mode for visible interpretations*, which restricts the display to all displayed interpretations.



To undo, click **RR** in the **Window** toolbar.



# Exercises