

# NEXT

A Schlumberger Company

## Petrel Geophysics Module 2: Data optimization



Schlumberger-Private

# Lesson 1: 3D volume and 2D line cropping



# Crop seismic data

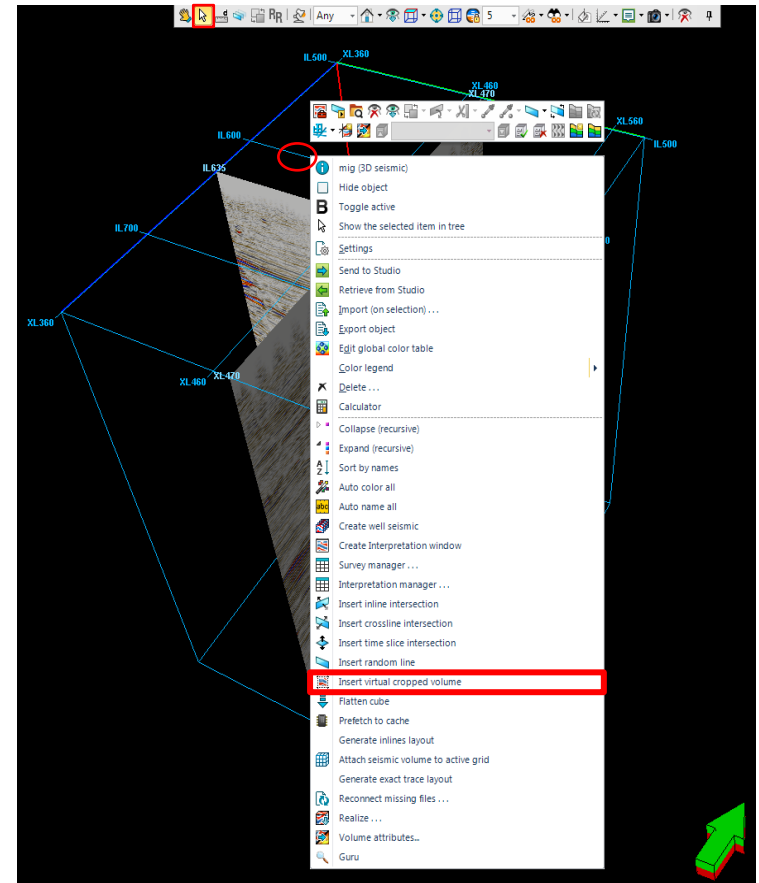
- Reduces the amount of data available
- Helps to focus on the zone of interest
- Allows for faster computing time
- You can crop the 3D seismic data by reducing the volume in the X, Y, or Z domain.
- It also is possible to skip inlines and crosslines.
- With 2D lines, you can skip trace numbers, CDPs, or SPs so that you can reduce the vertical range as well as the extent of the line.

# Crop a volume (1)


1. Display outlines of a seismic cube in a 3D window.

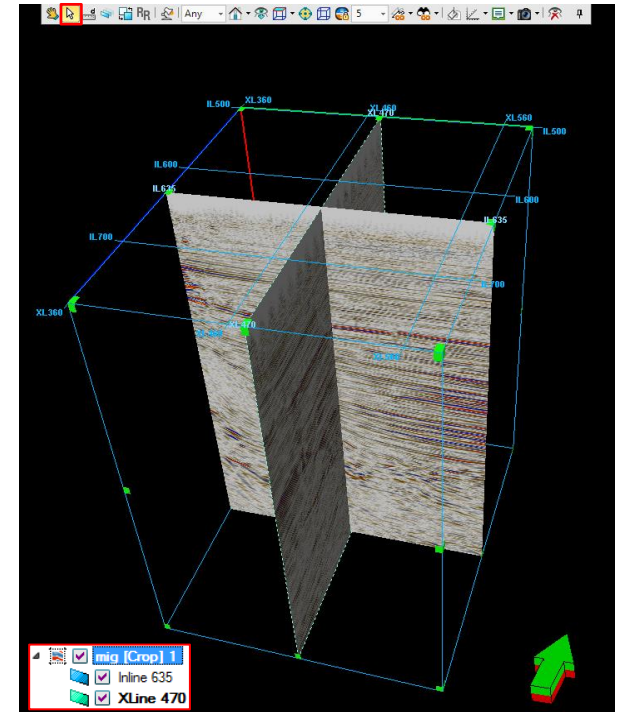
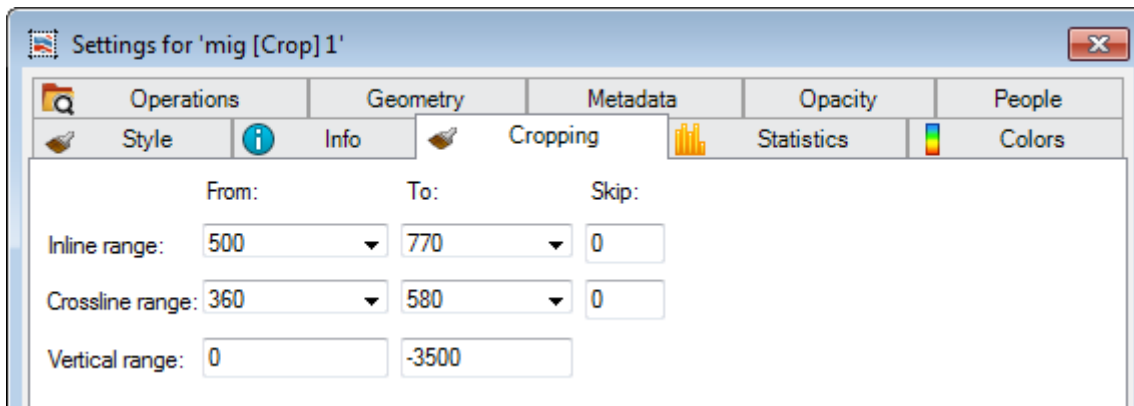
Right-click the outline of an Xline or Inline of the cube in the 3D window and click *Insert virtual cropped volume* from the context menu.

A virtual cube is created in **Input** pane.



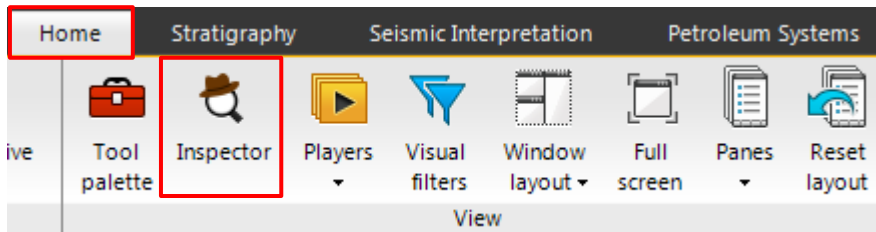
# Crop a volume (2)


2. Crop the virtual cube in one of these ways:
  - a. Click *Select mode*  on the **Window** toolbar and the green handles display in the **3D window**.
  - b. On the **Cropping** tab, select Settings and specify line ranges.

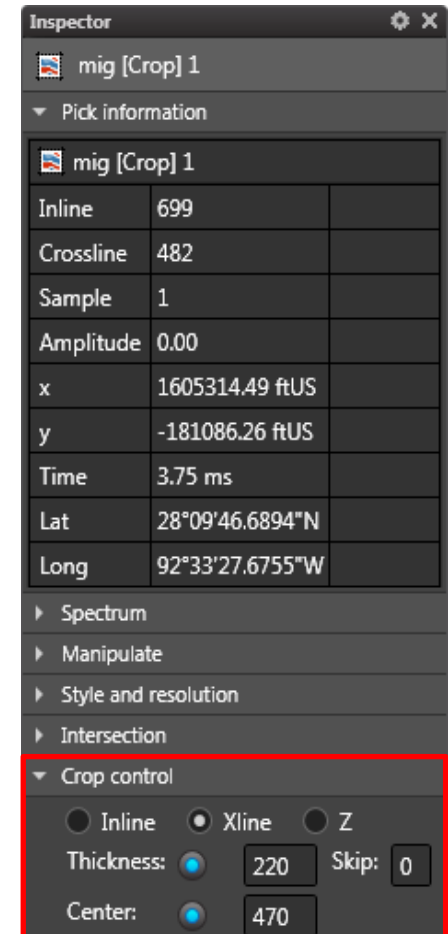


# Crop a volume (3)

You also can crop by using the *Inspector* tool. Open a **3D window** and, on the **Home** tab, in the **View** group, click *Inspector*.



3. In *Select mode*  , click the survey boundary of the inserted virtual cropped volume and crop the volume from the *Crop control* in the **Inspector**.

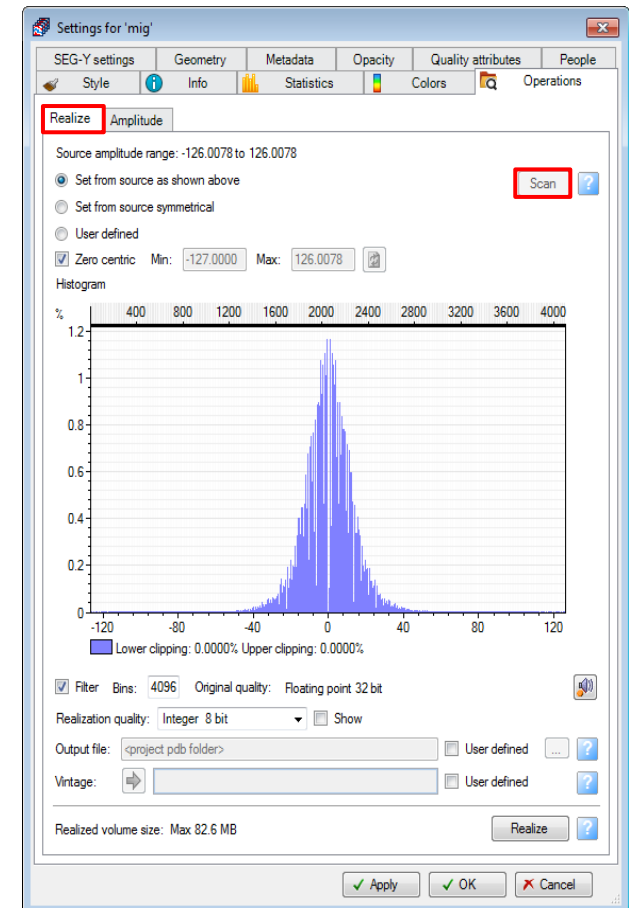


# Realization

*Realization* is the process of creating a physical copy of seismic data in the ZGY bricked seismic format.

Realization serves these purposes:

- Creates physical representation of a the seismic data
- Changes the value resolution
- Changes how the seismic data is handled
- Increases memory loading speed
- Realization requires disk space and can be a time-consuming process



# Exercises