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Christian Höcker[1] (1) Shell International E&P, 2280 AB Rijswijk, Netherlands

3D Seismic Interpretation Workflows with Volume Attributes

The advance of volume attributes has revolutionized 3D seismic interpretation. Early attributes such as coherency-type measurements and structural vector computations helped to identify and map structural and depositional phenomena, later developments were targeted at simplifying seismic interpretation by post-stack noise reduction, automated classification of seismic facies and highlighting specific features of interest in seismic volumes.

On the basis of case examples it is discussed which attributes and display techniques could be deployed at which stages of 3D seismic interpretation efforts, moving from an early assessment of seismic quality over reconnaissance of large seismic volumes to detailed structural and stratigraphic interpretation. Special emphasis is given to tool combinations that are particularly powerful in accelerating the turn-around time of interpretation efforts and generating fit-for-purpose results for critical decision steps in integrated subsurface modeling.