Visualization Technology in Quantitative Reservoir Characterization — Application to a Carbonate Reservoir

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ABSTRACT

Volume visualization environments can assimilate structural and stratigraphic detail at seismic and well log scales, improving the accuracy of geologic interpretations. When applied to reservoir-characterization projects, this improvement in accuracy can be used to detect and model subtle heterogeneities in the reservoir which can be incorporated into geologic models. This process can be successfully used to extend reservoir definitions, determine drilling locations, and minimize production decline. Through a series of visualization, analysis and interpretation, we evaluate a number of seismic attributes including seismic amplitude, frequency dependent attributes, geometry attribute (coherence) and LMR attributes and develop understanding of the reservoir.