

Interactive Reservoir Geomodelling from Uncertainty

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Abstract

Constructing structurally complex reservoir models at the appraisal stage is a complex task, with a high-degree of uncertainty. The lack of an intuitive set of modeling and visualization tools that support expert visual interpretation from geophysicists and geologists significantly increases the challenge. We present a set of interactive software tools to reservoir modeling in the appraisal stage. Our project use sketch-based modeling tools to allow the users to guide the model process with his/her expertise intuitively and quickly. We propose two different approaches that depend on the input data. The first approach is to create “what if” scenarios and start with no data or sparse data. The second one is to edit horizons which will form the horizon and fault network, and start using the seismic volume and a pre-extracted horizon.