

Geological 3D modeling of clastic rocks. A case study in Stenlille Structure, Denmark.

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The focus of this study is to build a geological 3D model of clastic rocks (Fjerritslev Fm.- Gassum Fm.) in Stenlille area (Denmark) in order to obtain a frame for further investigations (for example Petrophysical modeling).

The entire model is built with the aid of Petrel E&P Software Platform 2015 (Schlumberger).

Our data package includes: Well log data (GR, Resistivity, Density, Acoustic); Seismic lines; Well correlations.

Combining well log data and seismic lines, we define the geometry of the reservoir and also the surrounding area. Well correlations are used to define the top of each layer, we are interested to model.

Starting from well tops we build 12 surfaces that reflect the stratigraphy of reservoir: S1, SH1, S2, SH2 (Fjerritslev Fm.) and S3, S4, S5, S6, SH3, S7, S8, SH4 (Gassum Fm.).

All these surfaces are deformed by the underlying salt structure.

We will describe different cross-sections of the structure from the marginal to central part of the reservoir.

References:

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