Asmari Reservoir modeling of the of Shadegan Oil Field Using RMS Software

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Abstract

The Shadgan petroleum oil field located in Dezful Embayment is a symmetrical anticline with 23.5Km length and 6.5Km width in the Asmari top horizon. The field trend is similar the regional Zagros trend. The aim of the present study is to construct 3D-modeling of the Asmari reservoir using RMS software. The computer program utilizes of advanced mathematical and geostatical function to provide 3D insight of different reservoir properties such as structure and geology, dynamic fluids, well planning. Structural modeling is the first stage in modeling which was made in two steps: (1) prepare stratigraphic and structural planes and (2) generate fault modeling. Petrophysical and volumetrical calculation which were utilized geostatistical methods are second stage. Each parameter can be tested internally and determine any arbitrary points and planes. Data preparation was also made by the following steps: a) transformation and normalization, b) remove truncated trend and c) spatial structure.

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To calculate in situ oil volume, fluid and reservoir data are input data to software. This model constructed by help of critical limit concerned porosity, water saturation and shale ratio.

Generally, zonation, and evaluation of the reservoir, fault effects and oil volume determination are the main out put results of RMS software.