Estimating permeability from well log data in uncored borehole intervals is an important difficult task. On the other hand, direct prediction of reservoir permeability from seismic data is often supposed impossible due to resolution limitations of seismic data and hydraulic nature of permeability. In many cases reservoir permeability estimation is restricted to core scale and wellbore proximity. Commonly, permeability is estimated from various well log curves using empirical relationships or multiple linear regression (MLR), but it seems that artificial neural network (ANN) produces a more reliable response related to reservoir permeability estimation. The aim of this article is to build a reliable structural model of study area from seismic data, then a back propagation ANN is used for reservoir permeability estimation in uncored intervals. Also geostatistical approaches are used for permeability estimation. At last validity of methods has been checked by cross validation and a comparison between methods has been made.
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