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Permeability prediction in shale gas reservoirs using Neural Network

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Here, we suggest the use of the artificial neural network for permeability prediction in shale gas reservoirs using artificial neural network.
Prediction of Permeability in shale gas reservoirs is a complicated task that requires new models where Darcy's fluid flow model is not suitable. Proposed idea is based on the training of neural network machine using the set of well-logs data as an input and the measured permeability as an output. In this case the Multilayer Perceptron neural network machines is
used with Levenberg Marquardt algorithm. Application to two horizontal wells drilled in the Barnett shale formation exhibit the power of neural network model to resolve such as problem.
Keywords: Artificial neural network, permeability, prediction , shale gas.