عنوان مقاله:

APPLICATION OF ARTIFICIAL NEURAL NETWORK FOR POROSITY PREDICTION OF S10 RESERVOIR IN SEME OIL FIELD

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خلاصه مقاله:

Artificial intelligence techniques and neural networks in particular, have been increasingly applied in solving complex nonlinear problems from relatively few data. Burial depth, thickness, lithology and sandstone-to-reservoir ratio which are four fundamental factors determining porosity distribution of the reservoir system have been selected to build the neural network. This paper presents the findings of the application of Back propagation Artificial Neural Networks (ANN) for predicting porosity values of S10 reservoir in the Seme oil field of Benin Republic. Porosity values derived from core samples are used as target data in the ANN to train the network. Excellent matching of the core data and predicted values shows that the ANN approach is reliable and could be efficiently applied in reservoir modeling and characterization

کلمات کلیدی:

Neural Network, Reservoir, Porosity, Permeability Prediction, Specific Surface Area, Irreducible Water Saturation, Porosity

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