

Abstract :

In this paper, we predict the Total Organic Carbon from raw well-logs data recorded in two horizontal wells drilled in the Lower Barnett shale formation using the Multilayer Perceptron neural network machine. A comparative study between the Levenberg-Marquardt and the Conjugate Gradient learning algorithms shows the power of the Levenberg-Marquardt to predict the Total Organic Carbon in case of lack in the Bulk density log measurement; this can help to resolve the ambiguity of the Schmoker's method which requires continuous measurement of the bulk density log.