Gas Lift Optimization Using Artificial Neural Network and Integrated Production Modelling

Ismail Shaaban Ismail Mahgoub ,Eissa Mohamed El-M. Shokir; OrcidMazen M. B. Hamed; Azza El-S. B. Ibrahim

Abstract

the well flowing bottom hole pressure and fluid rates must be known for different applications in oil and gas industry. the current values of these parameters are necessary for different calculations such as gas lift optimization, well monitoring, reservoir performance, and field development plans. therefore, an artificial neural network(ANN) model was developed from an extracted data from PROSPER,PLT, and test seperator data. First the ANN model was trained and tested by synthetic data. Then, the ANN model was tested by a group of test points collected from the PLT reports. the developed ANN model yielded an accurate prediction of the well flowing bottom hole pressure and well fluid rate. the values of these parameters of each well are used to build an integrated production model IPM USING GAP software to perform different gas lift optimization scenarios

energy&fuels 2017, August