Permeability is one of the most important parameter in calculation of flow units. Prediction of
Northwest of Persian Gulf.

Keywords: permeability, core analysis, petrophysics , neuro_fuzzy method, neural network

Abstract:

Permeability is one of the most important parameter for reservoir engineers; because they can manage
processes of production in oil field. Also they can find different methods for enhancement oil
recovery (EOR). Often, calculation of Permeability is done in laboratory from cores, also well
testing and application of new logs such as (NMR) used to determination of Permeability. But
these methods in big scale (oil field) take so cost and time, while these are applicable for just
few wells. On the other hand loggings have done in most of wells. So, there is a need to use
a method could appropriately measure the petrophysical properties of reservoir using
available well logs. This study attempts to use neural network method and neuro_fuzzy
method for prediction of well logs permeability of the Burgan reservoir in Noroz oil field from
Northwest of Persian Gulf.

The results obtained from this investigation showed that the neuro_fuzzy modeling method is
superior to neural network method to predict reservoir permeability.

Keywords: permeability, core analysis, petrophysics, neuro_fuzzy method, neural network
method, Noroz field