
Integrated Recovery Model and New Correlation for Middle East Carbonates

Seyed Said Zaimy Taklimy, PEDEC, PEDEC Company, N.8 (Second Floor)- Sabzeh Alley - Vahidieh street, Tehran 16446 Iran, phone: +98-9122577003, fax: +16036888135, saidzaimy@yahoo.com

Objectives: The new tools are presented in this article to evaluation of Middle East carbonate oil reservoirs. The method is the Integrated Recovery Model and consists of an integrated model for predicting recovery from a field. Also, a correlation based on the data from Middle East reservoirs is presented.

Procedures: In this article the reservoirs are classified to predict the recovery factor in each group. The criteria for the field selection are: field size, reservoir type, geological age, geographic distribution and quantity and quality of the data collected. Most reservoirs in the study contain more than 75% of the data elements of the study. The integrated model uses a new concept called the "Recovery Index" which is tested against additional field data not used in the model development. This concept combines the effect of many parameters (all of which could be an influence on recovery factor) into a single predictive term. The model requires factors including reservoir rock properties, fluid properties, reservoir architecture, geology and reservoir energy.

Results and conclusions: • This model can predict the recovery of carbonate reservoir in the range of 5% variation. • The factors affecting recovery in carbonate oil fields are considered and evaluated. • The model presented can predict the recovery of fields in the range of 10 to 55% or more. • The examined field shows the model prediction is acceptable in new fields of Middle East. • Using the correlation presented allows a quick estimation of the recovery in the study fields.
