P106

Evaluation of Petrophysical and Petrographical Characterization of Asmary Formation-A Case Study in Southwest Iran

H. Akhundi* (National Iranian Drilling Company(NIDC))

SUMMARY

In petroleum exploration and production, porosity, permeability and fractures are most important parameters petrophysical for the evaluation hydrocarbon reservoir. This study presents aims to investigate types and quality of porosity distribution, permeability, and effect of diagenetic processes on them by combining the result of core analysis, well logging and the study of thin section in two wells of Asmary formation.

Also, fractures, diagenetic processes extention, types porosity, procedure permeability identification, of Asmari reservoir using velocity-deviation log. VDL is calculated by first converting porosity log data to a synthetic velocity log using the time-average equation of Wyllie. The difference between the real sonic log and the synthetic velocity log from porosity logs can be shown as a VDL.

According, 6 types of porosity were recognized in the formation under investigation. We recognized that fracture porosity is among the most important factors that increase permeability and quality reservoir, by connecting the pores to each other. Oslo diagenetic processes have their influence in different intervals of reservoir.

Dolomitization and Cementation are the most important factors in the increase and decrease of the Asmary reservoir quality respectively. This study showed that there are acceptable accordance between the results from the petrophysical and petrographica investigation.

In petroleum exploration and production, porosity, permeability and fractures are most important parameters petrophysical for the evaluation hydrocarbon reservoir that have a significant effect on reservoir fluid flow. This study presents aims to investigate types and quality of porosity distribution, permeability, and effect of diagenetic processes on them by combining the result of core analysis, well logging and the study of thin section in two wells of Asmary formation.

Also, fractures, diagenetic processes extention, types porosity, procedure permeability identification, of Asmari reservoir using velocity-deviation log. The velocity-deviation log, which is calculated by combining the sonic log with the neutron-porosity or density log, has been synthesized for 2 wells in one of the Iranian southwestern oilfields. VDL is calculated by first converting porosity log data to a synthetic velocity log using the time-average equation of Wyllie. The difference between the real sonic log and the synthetic velocity log from porosity logs can be shown as a VDL.

According, 6 types of porosity were recognized in the formation under investigation. We recognized that fracture porosity is among the most important factors that increase permeability and quality reservoir, by connecting the pores to each other. Oslo diagenetic processes have their influence in different intervals of reservoir.

Dolomitization and Cementation are the most important factors in the increase and decrease of the Asmary reservoir quality respectively. This study showed that there are acceptable accordance between the results from the petrophysical and petrographica investigation.