

Investigation of Microfacies and Sedimentary Environment of Ilam Reservoir in Iranian Mansuri Oilfield

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Exploration studies of Cretaceous Formations in Zagros have a high importance, because of numerous oilfields. Late Cretaceous Ialm Formation is deposited in North Dezful due to sea progression at the end of Turonian. This Formation has various thicknesses and facieses.

The main purpose is determining microfacieses and appropriate sedimentary model for the formation.

In this study 600 thin sections from cutting samples of three wells in Mansuri oilfield have been studied. In the studied intervals diagenetic process has played an important role so that dolomitic cement and high amount of shale volume has decreased porosity and permeability.

The lithology of Ialm Formation is mainly composed of fine-grained Limestone. This Formation is one of the most important hydrocarbon reservoirs in south-west of Iran which has been divided to 12 microfacieses (3 large facies belt consist of open marine, barrier and lagoon facieses) based on lithological studies of cutting

The proposed sedimentary model for the current study is Homoclinal Ramp. Diagenetic process of micritization is dominant especially in lagoon facies. Porosity of Ialm formation is first microporosity and then vuggy, interparticle, fracture and moldic porosities respectively.

Key words: *microfacies, porosity, cutting sample, diagenesis, reservoir*