

## عنوان مقاله:

Modeling Gravity Drainage in Iranian Reservoir and a Comparison with the Results of Software

## محل انتشار:

هشتمین کنفرانس بین المللی نوآوری و تحقیق در علوم مهندسی (سال: 1399)

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## خلاصه مقاله:

Gravity drainage mechanism is one of the prominent mechanisms of production in carbonate reservoirs through Gas Injection and Water Alternative Gas Injection processes and in the Gas Invaded Zones in which the difference between the density of the fluids and the elevation of the contacts surfaces are major parameters in fluid movement in the reservoir block and oil production from the matrix blocks. This work is devoted to modeling of gravity drainage mechanism, in one of the Iranian carbonate oil reservoirs. In this study, first displacement experiments of the gas-oil system are performed on core samples from Iranian carbonate reservoirs with different petrophysical properties. Experiments are conducted in situations where capillary, gravity and viscous forces are comparable. Gas is injected from the upper top of the core holder at low pressure and low flow rate. In this work also, a new model is proposed in accordance with the properties of Iranian reservoirs carbonate rocks, which is an approach for investigation of GD mechanism. The model was constructed on the basis of laboratory data obtained. The proposed simulation model once correlated with experimental data indicates good results in estimation of the ultimate oil recovery at both atmospheric and reservoir conditions. The proposed model could fit the simulation results obtained from Eclipse software. The results of the study show that the maximum oil recoveries in relations to gas gravity drainage in Iranian .oil reservoirs cores are about 5 and 4 percent at reservoir and atmospheric conditions, respectively

## کلمات کلیدی:

. Carbonate Reservoirs, Gravity Drainage, Hagoort Model, Eclipse Software

## لینک ثابت مقاله در پایگاه سیویلیکا:

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