

عنوان مقاله:

Numerical Simulation and Improvement of Whitson Method for Compositional Gradient Calculations in Petroleum Reservoirs

محل انتشار:

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خلاصه مقاله:

This study works on enhancing the accuracy of the Whitson algorithm, applied for calculating compositional changes in petroleum reservoirs. These improvements are implemented by choosing the proper calculated value of the parameter  $\lambda$  and using the more proper way to choose the pressure estimation in the algorithm. In this method, both liquid and gas phase calculations use just one reference point in calculations. Reference point is a point where certain compositions and pressure are set for a certain depth. Results of this improved numerical algorithm are matched well with the results of commercial software that validate this method. Results show that calculations would be more accurate by inserting some modifications into the algorithm.

کلمات کلیدی:

Composition gradient - Numerical simulation - Chemical . Gravity Equilibrium - Improved Whitson algorithm - Heavy oil

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