

Abstract

A computational code was used to solve a three phase displacement problem in stratified heterogeneous porous media. The simulator can solve basic equations of flow and transport for several components (more than 19 components). These basic equations are: the equation of conservation of the mass, pressure and the equation of energy. The discretization of the equations used the finite difference method with an implicit scheme for pressure and explicit for the saturation. The simultaneous flow of three fluid phases in a porous media is frequent in several industrial processes particularly in oil industry. The modelling of this type of flows is very complex, however the computer tool gives the possibility of simulating satisfactorily the very complex phenomena of assisted oil recovery