



Figure 1 shows the results of the simulation of two-phase flow in reservoir rocks using a lattice Boltzmann method. The figure displays the distribution of the two phases (oil and water) in the pore space of the rock. The oil phase is represented by black pixels, and the water phase is represented by white pixels. The figure shows that the oil phase is distributed in the larger pores, while the water phase is distributed in the smaller pores. This is consistent with the expected behavior of two-phase flow in a porous medium.

### 3. Results and Discussion

The results of the simulation of two-phase flow in reservoir rocks using a lattice Boltzmann method are presented in this section. The figure shows the distribution of the two phases (oil and water) in the pore space of the rock. The oil phase is represented by black pixels, and the water phase is represented by white pixels. The figure shows that the oil phase is distributed in the larger pores, while the water phase is distributed in the smaller pores. This is consistent with the expected behavior of two-phase flow in a porous medium.

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### Figure 3: Results of the simulation of two-phase flow in reservoir rocks using a lattice Boltzmann method.

The figure shows the distribution of the two phases (oil and water) in the pore space of the rock. The oil phase is represented by black pixels, and the water phase is represented by white pixels. The figure shows that the oil phase is distributed in the larger pores, while the water phase is distributed in the smaller pores. This is consistent with the expected behavior of two-phase flow in a porous medium.

### Figure 4: Results of the simulation of two-phase flow in reservoir rocks using a lattice Boltzmann method.

#### 1. Introduction

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