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## Effect of low-frequency vibration on relative permeability curve and irreducible water saturation

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The effects of the different accelerations of low-frequency vibration on irreducible water saturation, water and oil permeability, and residual oil saturation of low-permeability core were explored using core unsteady-state displacement analysis. Experimental results demonstrated that low-frequency vibration decreases irreducible water saturation, residual oil saturation, and water and oil permeability, but increases the relative permeability and moves the isotonic point rightward. The change in irreducible water saturation, residual oil saturation and isotonic point reached the peak value (4.1%, 10.3%, and 28.3%, respectively) within the narrow inherent frequency section of core under the vibration acceleration range from 0.3 m/s<sup>2</sup> to 0.4 m/s<sup>2</sup>. The research provides an important understanding for further discovery in oil/water distribution and increased water control oil mechanism information.

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