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## The Study of Solid Phase Particles Blocking Process based on CT scanning technology

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The pore blocking caused by solid particles migration is the major reason to formation damage. In order to further describe the solid particles blocking process, the realistic pore network model is established based on the results of micro-CT scanning. At the same time, the granularity distribution model is generated according to the solid phase particles size distribution. Then the “blocking volume” is introduced to judge whether or not pore blocking happen. Based on the conception of “blocking volume”, pore element is generated and all these characteristic parameters of pore element are calculated such as the flow distribution, pore size, particles granularity, blocking volume. According to the judgement standard, the intrusion ratio of solid particles, the sediment ratio of solid particles, the blocking ratio of solid particles, the sediment depth and the blocking depth are all obtained. In addition to this, the parameter sensitivity analyses of influence factors are taken. Through the study of pore blocking simulation, the aim to predict the probable formation damage caused by solid particles based on the structure of core and particles parameters have been achieved. It provides

### References

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