Special Issue

Recent Advances in Heavy Oil Reservoir Simulation and Fluid Dynamics

Message from the Guest Editors

The aim of the present collection is to explore advanced simulation techniques for heavy oil reservoirs and the study of their fluid dynamics, which are critical for optimizing extraction methods and enhancing oil recovery.

We welcome contributions of research and review articles that cover a broad range of topics related to the advanced simulation of heavy oil reservoirs and their fluid dynamics, including (but not limited to) the following areas:

- Novel modeling of heavy oil phase behavior and flow in the reservoir.
- The simulation of thermal recovery processes, such as steam-assisted gravity drainage (SAGD), cyclic steam stimulation (CSS), and other thermal and non-thermal heavy oil recovery methods.
- The influence of heterogeneities and other aspects of reservoirs on fluid dynamics and heavy oil mobility.
- Advanced numerical methods and algorithms in heavy oil recovery optimization.
- Fluid dynamics studies, specifically with a view on phase behavior, flow assurance, and enhanced oil recovery techniques.
- Integration of real-field data with simulation models for better predictability and performance

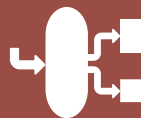## Guest Editors

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