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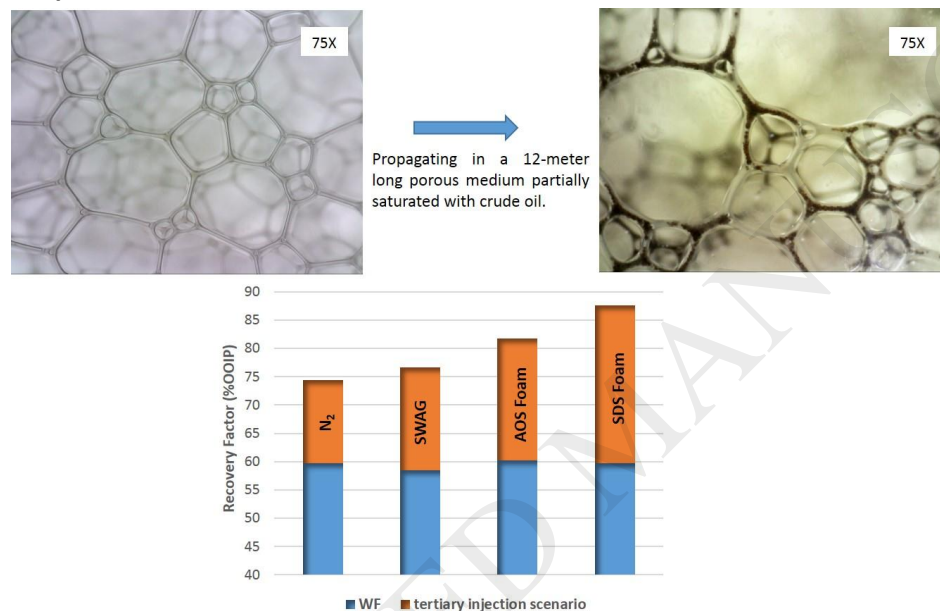
Foam Propagation and Oil Recovery Potential at Large Distances from an Injection Well

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Graphical abstract



Highlights

- Pressure has a positive impact on the foam stability.
- A well-screened foam can propagate to large distances from the injection well.
- A stable foam has a better oil recovery performance than gas and SWAG injection.
- Presence of the emulsified oil in the foam film can favor the foam stability.

Abstract

While foam propagation, foam-oil interaction and foam oil recovery performance have been investigated by numerous research studies, most of previous works were performed on short porous media with the maximum length of 30 cm. Therefore, their results mostly represent foam behavior in the vicinity of the injection well and may not represent the foam propagation, quality and oil recovery potential at large distances from the injection well. In this study, by using a high-pressure and high-temperature rig equipped with a 12-meter long porous medium and microscopic visualization facilities, foam stability in the presence and absence of a reservoir crude oil, foam propagation, foam-oil interaction, and finally

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