



Experimental Study of the Potential of Dimethyl Ether EOR in North Sea Chalk Reservoirs

Javanmard, Hoda; Seyyedi, Mojtaba; Jones, Sian; Nielsen, Sidsel Marie

Publication date:
2017

Document Version
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

Citation (APA):

Javanmard, H., Seyyedi, M., Jones, S., & Nielsen, S. M. (2017). Experimental Study of the Potential of Dimethyl Ether EOR in North Sea Chalk Reservoirs. Abstract from Danish Hydrocarbon Research and Technology Centre Technology Conference 2017, Lyngby, Denmark.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Danish Hydrocarbon Research and Technology Centre Technology Conference 2017

Experimental Study of the Potential of Dimethyl Ether EOR in North Sea Chalk Reservoirs

Hoda Javanmard, Mojtaba Seyyedi, Sian Jones, Sidsel Marie Nielsen

The present study aims at quantifying, at the laboratory scale, the potential of Dimethyl Ether (DME) Enhanced Oil Recovery (EOR) technology to improve oil recovery in North Sea chalk reservoirs. In DME EOR, the DME is dissolved into the brine and injected into the reservoir. The DME is mutually soluble in the water and oil phases with documented strong partitioning into the oil phase. Thus the DME migrates from the water phase to the oil phase, leading to oil swelling and mobilization of residual oil.

A series of core flood experiments have been carried out at reservoir conditions on aged core plugs from a North Sea chalk reservoir. The results reveal the significant potential of DME-saturated brine injection in improving oil recovery, with the secondary scenario giving a better performance than the tertiary. The results also show that the saturation condition of DME-brine mixture has a direct impact on the additional oil recovery obtained.