The EOR Alliance

ASP / SP Flooding

Description:

Increase reserves and oil production by the use of alkali (A), surfactants (S) and polymers (P) in ASP or SP combinations.

Application:

Surfactant based processes can recover trapped and bypassed oil using surfactants (S) to drastically reduce interfacial tension, and polymers (P) to improve mobility control. The alkali can help reduce surfactant adsorption, and can also generate in situ surfactants, which help reduce interfacial tension. Either alkali surfactant polymer (ASP) or surfactant polymer (SP), or only surfactant flooding can be used depending on reservoir conditions.

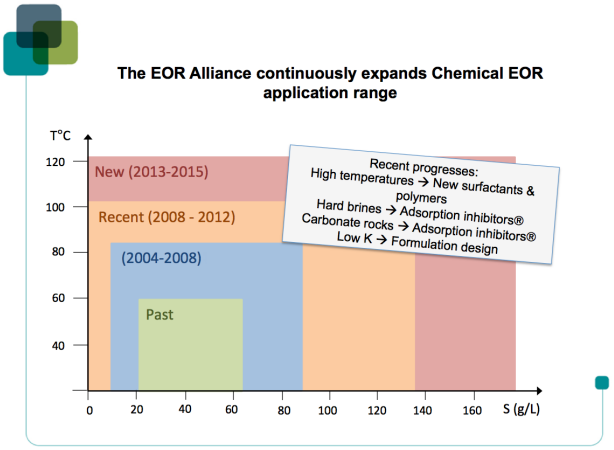
Results:

The EOR Alliance has developed an integrated workflow using robotized and both proprietary and other commercially available surfactants for designing optimal solutions for a variety of reservoir conditions:

- Soft and hard brines
- Heavy, medium and light oil
- High and low temperatures
- High and low permeabilities.

Challenges:

- High amounts of trapped and bypassed oil.
- Need to improve mobility control and sweep efficiency.
- Tailor and optimize specific formulation for a variety of reservoir conditions.
- Challenging reservoir conditions: high temperature, hard brines, high viscous oil, low permeability, etc.



Solutions:

- Increase reserves and oil production by using ASP/SP flooding technologies.
- Design these processes under optimal economical and technical conditions according to specific reservoir properties.

Objectives:

- Design the optimal ASP/SP formulation and slug size to increment oil production and recovery factor.
- Assess formulation performance in the laboratory and predict potential issues in the field.
- Mitigate risks of failure through extensive lab study and state-of-the-art simulations.

References: SPE129865, SPE164091, SPE155106, SPE164359, SPE169130, SPE169140, SPE169673, SPE167072, IPTC18208, SPE179561, SPE179792, OTC25919, SPE190361.

An Alliance between: IFP Energies nouvelles, BeicipFranlab, SOLVAY asking more from chemistry®

Get in touch: info@eor-alliance.com www.eor-alliance.com