



Responsible oil and gas

Enhanced oil recovery (EOR)



ENHANCED OIL RECOVERY (EOR)

OUR SOLUTIONS

Working alongside its **EOR Alliance** partners, IFPEN develops innovative EOR solutions to improve oil field recovery rates and optimize the use of produced water.

ALL TYPES OF EOR PROCESSES ADAPTED TO DIFFERENT RESERVOIR CONDITIONS



The **EOR Alliance** was created in 2010 by three companies, all leaders in

their respective fields and all with more than 30 years' experience in chemical EOR:

- **IFPEN**, a pioneer in EOR techniques, with cutting-edge laboratory facilities,
- **Solvay**, the global **chemicals and chemical formulation specialists**, with some thirty surfactant production sites around the world,

- **Beicip-Franlab**, field development and reservoir engineering specialists, **industry leader in the provision of consulting services and advanced software solutions for the oil and gas sector.**

The EOR Alliance provides oil companies around the world with **services and solutions adapted to every stage of their projects:**

- pre-feasibility study,
- laboratory tests,
- pilot design,
- pilot production,
- design on a field scale and deployment.

Expertise for each link in the EOR process chain:

- selection of the most appropriate EOR process, depending on the specific oil field conditions,
- development on a laboratory scale of a dedicated chemical formulation aimed at increasing the recovery rate,
- optimization of the pilot unit and development plan via numerical reservoir simulation,
- implementation on the field of the optimized process.

A flexible offer adapted to customers' needs:

- global and integrated for end-to-end project management,
- turnkey and adjustable to specific project characteristics with solutions covering one or several links in the chain.

The **EOR Alliance** also invests in R&I to develop new workflows and solutions, with a view to accelerating the launch to market of chemical EOR projects and extending the reservoir conditions suitable for the use of chemical EOR technologies.

PRODUCED WATER MANAGEMENT IN AN EOR CONTEXT

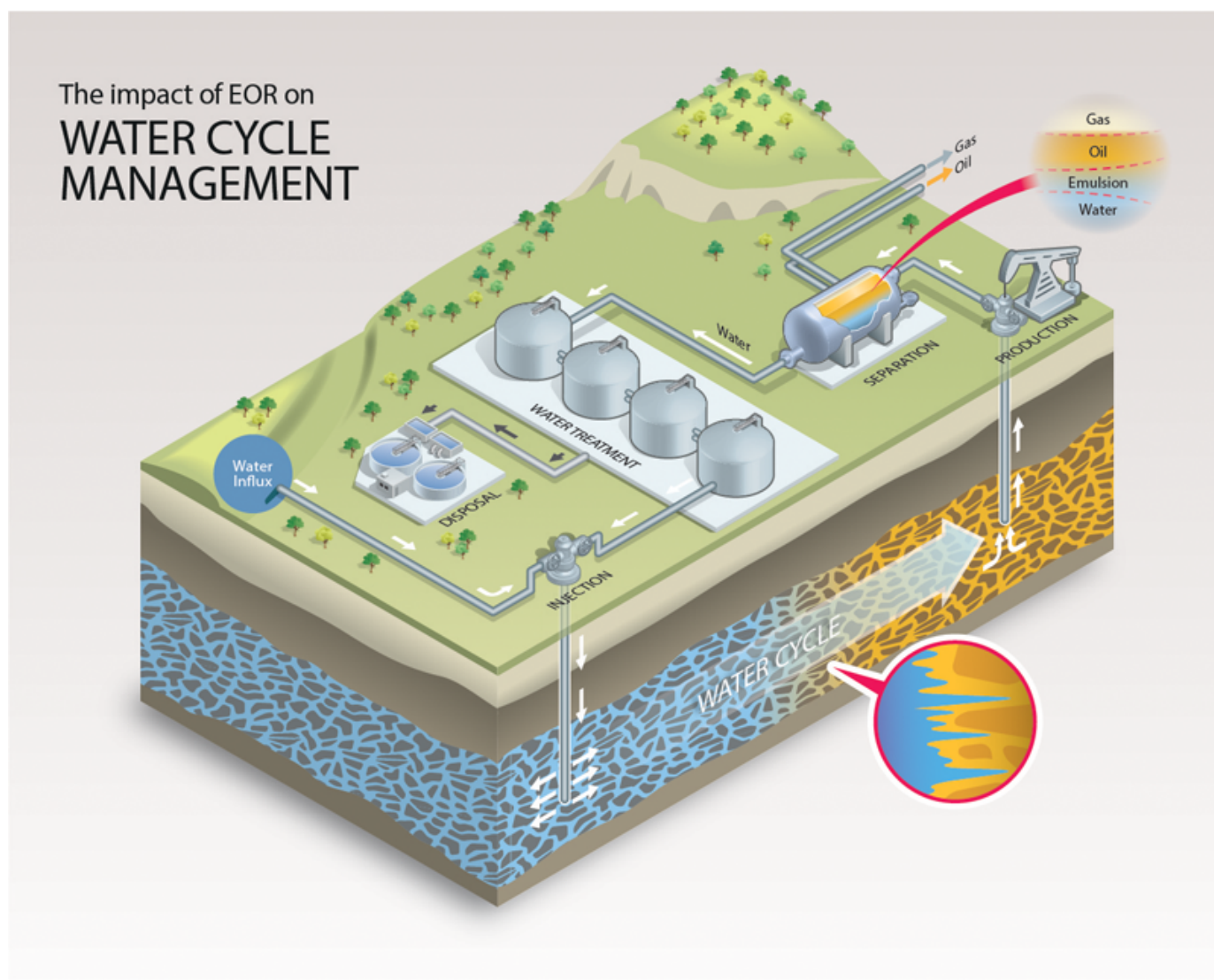
The water cycle is a research area IFPEN is pursuing within the **Dolphin™ JIP (Joint Industry Project)**, bringing together oil industry partners. This JIP is studying the **impact of additives used by chemical EOR technology on produced water management, in conditions representative of oil fields.**

Investigations relate to:

- water/oil separation and surface water treatment, looking specifically at the compatibility of water and oil and gas separation technologies with chemical EOR additives,
- the development of tailored solutions to facilitate produced water treatment ,
- the definition of conditions for the reinjection of water into the reservoir with a view to enhanced recovery.

The 1st phase of the Dolphin™ JIP (2013-2016) was a resounding success! It brought together 14 partners. Conducted on a laboratory scale, it related to the identification of operational risks associated with EOR projects. A 2nd phase was launched in 2017 involving the pilot testing of remediation solutions to tackle the identified risks.

The body of research conducted by IFPEN is contributing to the expansion of the integrated offer developed in partnership with Beicip-Franlab and Solvay within the context of the **EOR Alliance**.



CONTACT



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Our solutions

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