

Case study: Gulf of Mexico

# Upfront flow assurance and chemical surveillance engineering lowered ultradeepwater production costs

Baker Hughes worked in partnership with an ultradeepwater operator in the Gulf of Mexico (GOM) to provide project management and support in the design, commissioning, and operation phases of this high-profile project. A Baker Hughes project manager and an applications engineer were assigned to the project to manage the production chemical aspects and perform the necessary flow assurance and chemical surveillance engineering.

The following value-adding tasks were performed:

- Preliminary risk assessments
- System design consultations
- Risk-mitigation plan development
- Initial system commissioning planning
- Chemical-treatment strategy development

- Custom chemical formulation to operator defined specifications
- Final system review

Engineers from Baker Hughes and the customer formed a Well Production Operations team to provide holistic support for chemical flow assurance and electrical submersible pumping (ESP) system performance. These experts were crosstrained in both production-chemical and ESP technology. The team continues to provide 24-hour surveillance and response to address ESP/downhole chemical performance issues.

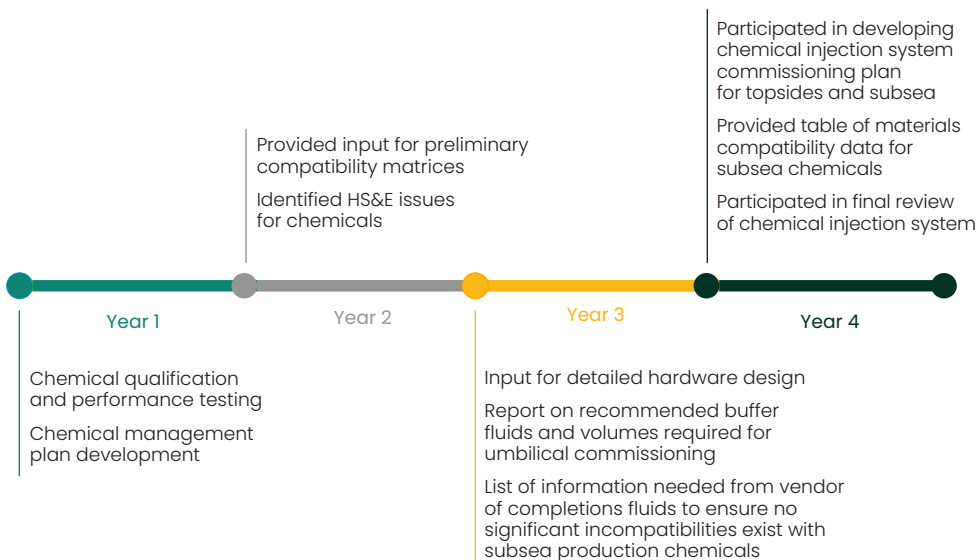
This has resulted in lower lifting costs, flow assurance, and optimal maximum run life performance to achieve production goals.

## Challenges

- GOM ultradeepwater
- Water depth to more than 8,000 ft (2,438 m)
- 100,000 barrels of oil per day design capacity
- Subsea separation and boosting

## Results

- Significant cost savings and lower overall risk
- Prevented umbilical plugging risk
- Improved ESP and separator efficiency



Timeline highlighting the key deliverables leading up to first production.