

What advanced completions technologies are available to be applied in our oil and gas field?



**We provided recommendations for advanced completions technologies to be applied in the field for a Middle Eastern joint venture operator.**

**Technologies**

- Downhole water separation (DOWS)
- Water shut off (WSO)
- Electrical submersible pumps (ESP)

**Domain expertise**

- Oil and gas
- Reservoir engineering
- Subsurface
- Artificial Lift



### **Our client asked:**

Our client – an oil and gas (O&G) operator – was required to provide recommendations for advanced completions technologies, to be applied to an O&G field in the Middle East for which they are non-operating partners.

The reservoir was already very depleted, with bottom aquifer water and peripheral water injection and production from horizontal and deviated wells.

The following technologies were considered to compensate for the water influx and depleted reservoir conditions expected: Downhole Water Separation (DOWS); Water Shut Off (WSO) – mechanical and chemical; and Electrical Submersible Pumps (ESP).

### **The project story:**

Our methodology was based on a combination of in-house information, desk research and interviews with industry experts to capture current levels of technological maturity, actual field applications, leading vendors' capabilities, and lessons learned from operators.

Hypotheses generated from the desk research were validated and built on during interviews with industry experts from operating companies, service companies and technology providers.

### **Results: deliverables and outcomes**

Our report contained information that enabled our client to propose suitable completion designs based on the state of the art of current technologies, their capability, applicability, and learnings from case studies. We recommended that several technology combinations be considered in the completion designs for the field.

We also ruled out the use of DOWS technologies, which were unsuitable for advanced completions in our client's field because the technologies are challenging and unreliable. DOWS technologies are considered embryonic so there have been many challenges with the technology and many different measures have been trialled in order to overcome them.

### **Contact us**

[info@sagentiainnovation.com](mailto:info@sagentiainnovation.com)

+44 1223 875200

[www.sagentiainnovation.com](http://www.sagentiainnovation.com)

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