



OTC 19407

The IOR Research Programme

Astrid Helga Jørgenvåg and Jan Richard Sagli, StatoilHydro ASA

Copyright 2008, Offshore Technology Conference

This paper was prepared for presentation at the 2008 Offshore Technology Conference held in Houston, Texas, U.S.A., 5–8 May 2008.

This paper was selected for presentation by an OTC program committee following review of information contained in an abstract submitted by the author(s). Contents of the paper have not been reviewed by the Offshore Technology Conference and are subject to correction by the author(s). The material does not necessarily reflect any position of the Offshore Technology Conference, its officers, or members. Electronic reproduction, distribution, or storage of any part of this paper without the written consent of the Offshore Technology Conference is prohibited. Permission to reproduce in print is restricted to an abstract of not more than 300 words; illustrations may not be copied. The abstract must contain conspicuous acknowledgment of OTC copyright.

Abstract

The paper includes:

- A brief introduction to the main technologies being developed and implemented in StatoilHydro's IOR R&D program.
- An evaluation of how the technologies will influence on the recovery from the company's existing fields

StatoilHydro will give a brief introduction to how the company envisages fulfilling the demanding requirements to significantly improve the oil recovery from producing fields. StatoilHydro's recoveries are favourably compared to other operators. The paper will put the presented technologies and methods into the IOR perspective.

StatoilHydro has traditionally had its focus on the Norwegian Continental Shelf (NCS). The focus is now turning towards deeper waters like the Gulf of Mexico, and arctic areas. This means that it is crucial that technologies that are being developed should be suited also for these fields.

Introduction

As a mean to meet the StatoilHydro business challenge of "Increasing the value of existing business and secure platform for further growth", the Improved Oil Recovery (IOR) research programme was established after the merger of Statoil and Hydro Oil & Gas in October 2007. Based on the subsurface activities from the former Statoil research programmes SIOR and TAIL, together with Hydro's IOR programme, a large and powerful R&D programme, including geophysics, reservoir, drilling, well and production technology was formed.

The IOR programme was established to supply StatoilHydro's assets with critical technology and work processes in order to achieve a world class recovery factor from all relevant areas. A good collaboration model with the relevant business area in the company has been established.

The StatoilHydro assets on the NCS are in a situation where new technology is required "today" to maintain the production level. This applies in particular to the mature fields like Heidrun, Gullfaks, Snorre, Brage and Oseberg. The somewhat younger subsea fields will within a few years be in a similar situation. It is of high importance to develop the technology needed in due time to make use of the existing infrastructure.

StatoilHydro has a high focus on the Gulf of Mexico (GoM), where deep water technology will be essential. StatoilHydro does not have any leading position in deep waters today and new technologies both within solutions for field development as well as for reservoir management will be crucial to achieve a sound economic result of the investments. Most of the efforts on shallow waters will be directly relevant also for deep water applications. The increased focus on carbonate reservoirs from the portfolio outside the NCS requires new competence and technology.

Based on the business challenges, the IOR program has identified 3 main challenges, which will act as the basis for the R&D efforts within the IOR program: