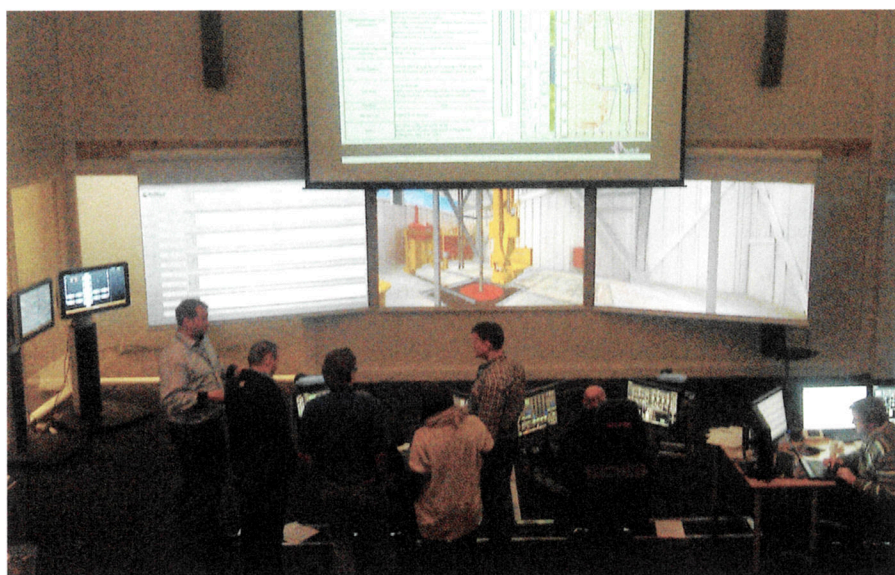


Hands-on Drilling and Well Control Training using Drilling Simulator

Statoil and co-operating companies have developed an advanced drilling and well simulator which combines a highly developed top-side simulator with a superior down-hole simulator. The purpose of this Drilling Simulator is to provide realistic team training on common and critical drilling and well operations in order to increase operational understanding, improve communication and to develop teams that are better prepared to execute tasks, handle critical situations and to ensure safe and efficient drilling operations according to the Compliance and Leadership model.



A frame agreement was established in August 2010 with SINTEF Petroleum research AS for the development and use of the Intellectus hiDRILL simulator. The development has been based on a step-by-step process where the Statoil Project Team has qualified the downhole models as stand-alone and coupled together in a Well Control scenario. In order to qualify these models several in-house software packages have been used for verification purpose. The simulator performance has then later been verified with historical well and operational data. In this respect Snorre A, Snorre B and Gullfaks C have made valuable contribution with the supply of data and verification tests on the simulator together with personnel from these projects.

The Drilling Simulator is based on 5 modules (General Drilling, HPHT, MPD, TTRD and ERD) which are used in order to set-up the well scenarios as requested by the licenses. The present status is that the two first modules have been sufficient tested in order to prepare courses based on General Drilling and HPHT scenarios. Such courses have already been prepared with success for the Gudrun HPHT project. The next module to be completed is the MPD module with expected start of pilot testing in December

2011. Hence, the way forward for the Statoil Project Team is to complete the development of the remaining modules while arranging courses according to the simulators capabilities and license requirements.



The preparation of new courses requires input from D&W projects in order to configure the simulator based on data that are directly related to their well and potential challenges. In this respect the projects need to submit a standard data sheet with field, well and rig data minimum 2 weeks before the planned course date. The project also needs to submit information on identified hazards and relevant procedures for the preparation of cases. Based on this input the simulator team will work together with the D&W

project in order to prepare customised cases and ensure correct set-up of the simulator.

The simulator training is performed at Oiltec Solutions AS (Koppholen 20, 4313 Sandnes) from 08:30 to 18:00 and includes exercises on the simulator and presentations of relevant topics during class room sessions. The target group is the drilling team consisting of Drilling Supervisor, Tool pusher, Driller, Assistant Driller, Derrick man, Mud logger, Mud engineer, Cementer, Drilling Engineer, Lead Drilling Engineer and Drilling Superintendent. For the class room sessions the D&W project need to allocate personnel for the presentation of relevant hazards and procedures as selected by the project. Based on experience from pilot tests and courses conducted it is recommended to train one crew/day in order to achieve hands-on training for the entire drilling team and avoid long periods of passive waiting time.



Detect - React - Recover

Welcome
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