Exploration drilling campaigns - Optimized drilling performance using drilling consortium management

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Abstract

Currently there are many smaller operators drilling on the Norwegian continental shelf. It is not an optimal use of resources to staff a complete drilling department in-house in all of these companies. For others, the drilling activity requires that wells are drilled in a discontinuous manner. Therefore, the drilling process can easily be costly and inefficient.

The current paper describes in detail, based on a three year field experience, how an operator, a well management company and an integrated service provider efficiently run a drilling campaign. During this campaign five different operators have used this management system to efficiently drill exploration wells. The drilling rig Bredford Dolphin was hired by a consortium of operators. All the planning of the drilling operations and the follow up during the entire operation were conducted by a well management team. The same provider of integrated services has been used throughout the whole campaign, giving the drilling operations a high priority.

Exploration drilling involves several work demanding processes including rig hire and management, well planning and reporting, operations, logistics and setup of emergency preparedness organisation. Use of an independent well management team handling such items continuously without removing the operators responsibility, was very efficient. This core team also included the integrated service provider to remove any logistical hindrances.

As will be shown in the paper, this combination of companies using a rig continuously throughout the campaign has produced several of the best exploration well drilling operations on the Norwegian continental shelf. This is illustrated by presentation of the Det norske\'s benchmarking data from these operations.

Introduction

There are currently more than fifty operators and partners active or with interests in drilling operations on the Norwegian continental shelf. Only a handful of these are large enough to maintain a complete exploration drilling department. Some of the larger companies have several in-house drilling departments. These large operators may have continuous drilling campaigns requiring a long term rig contract for their exploration activities. For other companies, the drilling activity is smaller. Therefore, wells have to be drilled in a discontinuous manner, leading to a costly and inefficient drilling operation.
To avoid the costly and inefficient drilling operation, a number of operators agreed to join a rig consortium. This consortium hired the semi submersible drilling rig Bredford Dolphin. Drilling management together with the detailed engineering was conducted by a well management company. Finally, a contract for integrated services from a service provider was developed to minimize the interface between the different drilling enterprises and to optimize the logistical activity. In the forthcoming sections, this issue will be described in more detail.

Application of integrated service contracts is not new. Several methods of integrated services have been discussed in the past. Haugland (2010) summarizes that "too often, even the best intended integrated drilling operations get stranded??. He concluded that to be successful with integrated services contracts the one-sided focus on technology has to be replaced with focus on people.