Originally appeared in World Oil® JANUARY 2022 issue, pg 30. Posted with permission.

Giving control back to the driller: Fully integrated MPD systems

A comprehensive suite of products advances drilling with excellent, integrated capabilities.

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The MPD industry has many service companies *claiming* full integration of managed pressure drilling (MPD) systems. At NOV, results show we're actually doing it.

Operators are asking rig contractors for an MPD-compliant or MPD-capable rig for operations on land and offshore, inclusive of deepwater rig applications with MPD applicability. This results in many service companies providing patchwork solutions on an ad-hoc basis. Once they come up with the various components of the system, to prepare the rig for MPD operations, they must update the software to allow the systems to communicate, as well as additional hardware and personnel to gain visibility of the MPD system and controls. That's a less-than-ideal solution.

In contrast, rather than enhancing only their visual aspects of systems and controls, MPD systems should fully integrate into the rig's operating systems and software interfaces, putting the operator in the driver's seat with complete visibility and control.

THE CHALLENGE

In this industry, changing the mindset of the rig operator is always going to be the biggest challenge. Through this fully-capable, integrated system, the MPD process completes the closed-loop system in a way that allows for a fully integrated and capable level of control, inclusive of **all** rig functionality.

In the past, MPD was incorrectly perceived as complex, time-consuming and expensive. As MPD technology advances, operators around the globe realize that, with true integration, MPD delivers reduced drilling hazards, increased control, and complete visibility.

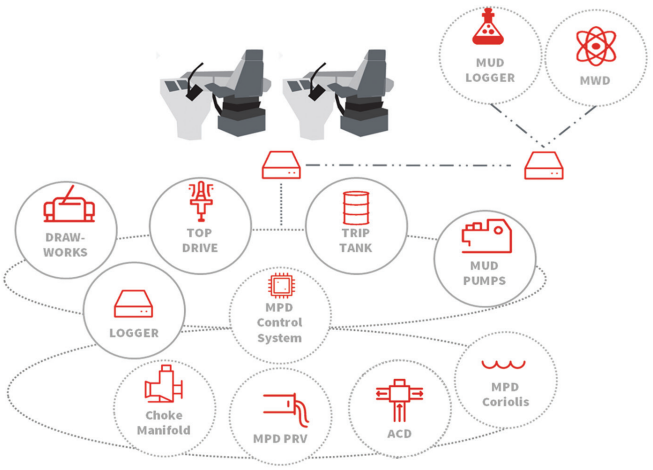
The additional equipment, heightened scrutiny, and accessibility of information about the well, all position a fully integrated MPD system as an essential, necessary part of the well-delivery process, from the very beginning.

HIGHER EFFICIENCY, LOWER COSTS

A fully integrated MPD system on a rig (**Fig. 1**) lowers the overall cost, enhances productivity, and increases skills on the rig site to manipulate the MPD equipment to settings that optimize well efficiency. As MPD systems become permanent fixtures on rig sites and are integrated into the rigs' automation infrastructures, additional benefits are realized: increased site safety, reduced personnel, improved visibility, and more control—reducing the likelihood of a kick or blowout.

Complete rig integration and rig readiness are not jobs that can be pieced together. The industry, and the critical work we do, demand a seamless transition from conventional drilling to MPD. To accomplish that, operators will need to move away from service companies offering partial solutions through an application and toward a fully integrated MPD system. Control of the MPD operation should be where it belongs—at the driller's fingertips.

Fig. 1. A fully integrated MPD system lowers the overall cost, enhances productivity, and increases skills on the rig site while optimizing well efficiency. Additional benefits can include increased site safety, reduced personnel, improved visibility, and more control.



A RIG-READY SOLUTION

At NOV, we're giving MPD controls back to the people who know best—the drillers, simplifying overall MPD operations while reducing the chances of miscommunication between drillers and MPD-specific personnel. Increased MPD system visibility and control allow the driller to monitor, control and optimize downhole events and surface equipment. This level of control is important, not only to deepwater and jack-up operations, but on land as well. WO

MIKE VANDER STAAK holds the position of senior director, Global BD and Strategic Relationships, at NOV. He has spent the last 20 years in the UBO and MPD sectors. Mr Vander Staak is active in the MPD community and has served as chairman of the IADC UBO/MPD Committee, in addition to the SPE paper selection panel. He has spent half of his career working in the service sector with companies such as NOV, and has spent the other half of his career working for operators, including Hess and Dubai Petroleum.