Sperry Remote Operations Center™ (ROC™) Captures Knowledge and Prevents NPT
Location: Saudi Arabia

Operator’s Challenge
On a multi-well project, leveraging knowledge and experience gained on other projects in the area to timely detect problems, prevent damage to wells, and continue drilling on schedule.

Halliburton’s Solution
Established a Real Time Center™ (RTC™) in Saudi Arabia for Sperry’s internal use as a Remote Operations Center™ (ROC™) staffed with ADT® drilling optimization service experts to quickly identify potential costly vibration problems, while maintaining a good rate of penetration (ROP). The integrated learnings from all wells managed by the Sperry ROCs are immediately available for application to new situations.

Economic Value Created
Saved $200,000 worth of rig time by quickly identifying damage to the bit that could lead to increased vibration severity and reduced ROP. The ROC was able to use lessons from other wells in the area to make decisions in real time and limit non-productive time (NPT).

Knowledge helps prevent lost drilling time
Halliburton has built more than 50 Real Time Centers across the globe so far. About half of these were constructed for national and international oil companies and are usually manned by our experts, as well as our clients’. The rest were built as internal RTC hubs for our own service quality and operational excellence control, and are referred to as ROCs. They are fully staffed by Halliburton personnel specialized in the type of operations running at the centers. Worldwide access to experts specializing in every aspect of the drilling process is just one reason for Sperry’s success.
Lessons from previous wells are critical to improving drilling performance. In Saudi Arabia, when faced with a difficult circumstance, the ROC was able to quickly find knowledge for a similar situation. At approximately 11,500 feet (3,505 meters), an abnormally slow ROP coupled with vibration change indicated a severe problem with the bit. Applying knowledge gained from the previous drilling operation, the ROC team made a real-time decision to pull the bit and re-drill the hole to total depth. While the local operations team was initially reluctant, the ADT® drilling optimization service specialist in the ROC was able to accurately define the problem and convince the customer that the possible Geo-Pilot® rotary steerable system damage and associated repair costs were significant enough to warrant pulling the tool out of the hole.

On inspection, the drill bit was severely damaged, but due to timely detection there was little logging data lost, minimal time spent in low ROP, and a single bit failure – all of which amounted to a significantly less costly drilling event. The Geo-Pilot® rotary steerable system was sent back down hole to continue drilling.

After reaching the target depth, and completing the drilling effort, overall savings of about US$200,000 were recorded. The savings can be attributed to reduction in NPT by using the ROC’s closed loop system. Where standard operations must wait hours for results, the ROC provides immediate feedback. This step change in engineering delivers improved service quality, and ultimately a better hole with fewer incidents. Building on the current knowledge base, while sharing and understanding the lessons learned, is an integral reason behind the continued success of Real Time Centers in general, and in this case of ROCs in particular.

**Expertise with advanced technology**

Sperry Drilling Services is fully committed to the vision of being the undisputed industry leader in providing real-time solutions. In the most basic of terms, this means dramatically improving the speed and quality of the decisions needed for the development of our customers’ assets.

The ADT® drilling optimization drillstring integrity service focuses on the prevention or reduction of destructive downhole mechanical forces. The service utilizes downhole vibration and caliper sensor measurements, surface drilling parameter measurements, and BHA and critical frequency modeling software to determine the active mechanisms causing drillstring vibration.

The Geo-Pilot® rotary steerable system delivers unprecedented speed and up to a 20 percent reduction in non-productive time. Using point-the-bit technology, the Geo-Pilot rotary steerable system precisely steers the wellbore while rotating the drillstring to increase ROP and reduce drilling days. The Geo-Pilot service delivers real-time continuous at-bit steering control and formation evaluation to provide an accurate assessment of the wellbore position at all times.

**Halliburton’s Internal Real Time Centers: ROCs**

From ROCs, seasoned Sperry specialists mentor and guide junior personnel on location and oversee several ongoing operations at a time, addressing the most pressing challenge of today – lack of experienced personnel. The ROCs help deliver improved service quality, safer operations, and reduced NPT. The client can rest assured his asset is under control.