National Oilwell Varco has produced this brochure for general information only, and it is not intended for design purposes. Although every effort has been made to maintain the accuracy and reliability of its contents, National Oilwell Varco in no way assumes responsibility for liability for any loss, damage or injury resulting from the use of information and data herein. All applications for the material described are at the user’s risk and are the user’s responsibility.

**NOV™ Driller’s Workstation**

**RISE™ technology for CYBERBASE™**

---

**Corporate Headquarters**
7309 Parkwood Circle Drive
Houston, Texas 77036
USA

**Rig Systems Headquarters**
10353 Richmond Avenue
Houston, Texas 77042
USA

© 2016 National Oilwell Varco | All Rights Reserved

RigDoc 96166338 Rev 01
**CYBERBASE™ v14: The flexible, upgradable and reliable drilling control system**

**CYBERBASE™** is the original integrated drilling control system built for seamless integration of machine control, process management and information sharing. True to the original design, the **CYBERBASE** system works with any machine and complimentary system while maintaining optimal process safety and cybersecurity.

** CYBERBASE v14 bridges the challenge of aging technology through applying purposeful innovations**

- Centralized datacenter environment hosts data, monitoring, analysis, support and report applications
- Virtualization technology allows expandable software and extendable hardware independently
- High availability, redundancy and disaster recovery of critical operations
- Data provider for efficient capture, storage and retrieval of information
- Software lifecycle management
- Extensive system monitoring and administration
- System hardening for emerging cybersecurity threats

**Drilling system data center**

The first in the industry data center solution to fully decouple software from hardware creating a truly future oriented system. A data center is inherently fault tolerant by dynamic load sharing and allowing hot swapping of hardware without interfering with the drilling operations. As a by-product, the data center allows more computing and data storage capacity hence giving the end user faster response time, better information and cheaper upgrades. Solutions such as the drilling data, analysis and report functions, system health monitoring, eHawk™ remote support, digital CCTV solutions, Webdriller, NOV Alarm Statistics, Sdi.Connect etc. are co-hosted in data center as virtual machines.

**Cybersecurity hardening**

Cybersecurity is important and remains a high-focus for CYBERBASE by implementing defense-in-depth strategy.

- Strict remote-access control through a DMZ and antivirus software protection
- Managed USB ports, segregated network and firewalls help maintaining the air-gap
- Application whitelisting prevents unintended applications from running
- Extended system surveillance including deep packet inspection and network intrusion detection

**The CYBERBASE front and stations use high reliability failure smart clients. Networks are upgraded to improve capacity, reliability, scalability and maintainability. Capturing, storing and providing data**

The **CYBERBASE** system has many stakeholders consuming information such as drilling and machine data, manuals, configuration files and software management history.

**CYBERBASE solves the challenges associated with explosive growth in data and increasingly complex storage environments.**

**Key Features:**

- Sitting and standing operation
- Unprecedented adjustments for optimal ergonomics
- User storable multi-angle configurable positions
- New 2-button joystick with operator feedback

**RISE™: elevating the industry standard**

NOV introduces **RISE**, the only driller’s workstation designed from the ground up to address ergonomic concerns, minimize fatigue, and keep your crew in top form with its industry-leading customizable operating positions. The development of **RISE** grew from years of ergonomic research and theory to offer your cabin crew the opportunity to work with better posture less stress, and more focus on the job at hand. Our **RISE** workstation brings unprecedented chair adjustment options to custom-fit the operator’s body and provide optimal comfort.

**The RISE workstation is the premium platform for CYBERBASE systems.**

An operator’s physical well-being during drilling operations significantly impacts rig crew performance. Hazards of sitting for extended periods of time include increased discomfort and increased risk of back injuries. In order to improve the driller’s well-being during operation, **RISE** provides a posture change ranging from any position between sitting and standing.