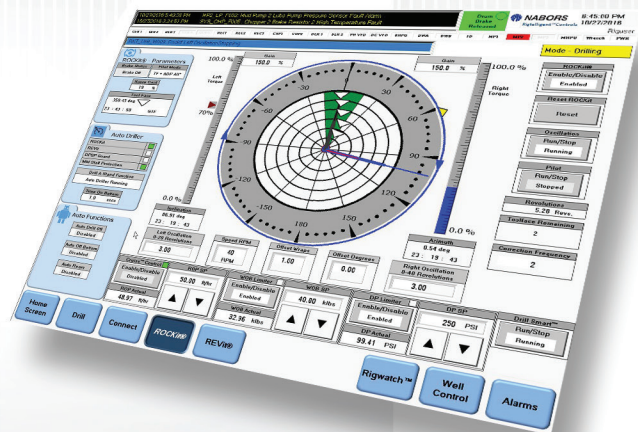




ROCKit[®] System

Reduce drill pipe friction,
increase rate of penetration



Nabors' ROCKit® System is a patented directional steering control system that oscillates drill pipe to reduce friction and increase penetration rate, reducing drilling time and resulting in huge savings in rig time costs.

▶ ABOUT THE ROCKIT® SYSTEM

The ROCKit® Suite significantly increases rate of penetration (ROP) by rocking pipe and delivering ideal weight to bit. It promotes improved toolface control by allowing fine adjustments while still drilling ahead, reducing the need for lubricants and other friction-reducing additives. Drillers save time by quickly setting toolface orientation.

▶ THE ROCKIT® SYSTEM HELPS DRILLERS:

- **Overcome low ROP when sliding** by allowing the directional driller to oscillate the drill pipe left and right while slide drilling. The amount of oscillation can be adjusted to avoid rotating the mud motor and bit while maximizing friction reduction.
- **Slow toolface setting time** through a patented quill position that enables the driller to quickly orient the toolface prior to sliding from a human-interface control panel in the driller's cabin.
- **Steer corrections while slide drilling** from the control panel, eliminating the need to come off bottom to make steering corrections.

▶ THE ROCKIT® SUITE FEATURES THREE MAIN COMPONENTS:

Nabors ROCKit® Base System – Directional Steering Control features:

- Patented technology that oscillates drill pipe to reduce drag and increase rate of penetration (ROP)

▶ CASE STUDY

Directional Drilling Time, with ROCKit® technology and without ROCKit®

Data from case study in Barnett Shale show typical result using ROCKit® technology

- Precise angle offset control that simplifies toolface orientation
- Add-on technology for AC top drives from other vendors

ROCKit® HUD™ Integrated MWD Heads Up Display features:

- Integrated measurement while drilling (MWD) toolface and survey data to help drillers slide more effectively
- Unambiguous, real-time toolface advisory
- A system that “scores” the driller’s ability to maintain the toolface and slide effectively
- Torque and delta pressure displayed on screen to provide leading indicators of toolface steering problems

ROCKit® PILOT™ Automated Directional Steering Control System features:

- Extends ROCKit® HUD™ System functionality to include automated slide control
- Automatic toolface steering through top drive quill position control
- Allows tuning of frequency and aggressiveness of steering interventions
- Ability to combine manual control with ROCKit® Pilot™ automated steering technology

Why choose Nabors' ROCKit® System?

- Reduce friction and increase rate of penetration
- Reduce drilling time
- Save in rig costs

Enhance Your Operations

Nabors offers an integrated suite of performance products and services that work with ROCKit® System to improve drilling performance. They include:

- **Total Control NonStop Driller:** A sub-based constant circulation system designed to improve drilling efficiency, operational safety, hold condition and equipment integration.
- **DrillSmart™ Technology:** A best-in-class automatic driller based on proprietary technology that allows the system to adapt to operating parameters and drilling conditions while optimizing performance.

