NOV Rig Technologies

NOVOS™
Reflexive Drilling System

NOVOS™ provides unmatched control, consistency and value as the industry's only reflexive drilling system, automating repetitive drilling activities and optimizing your drilling program.

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What Is a "Reflexive Drilling System"?

A reflexive drilling system is designed to perform a series of actions when prompted, just as human reflex respond when acted upon by a specific stimulus. The NOVOS™ reflexive drilling system is easily scalable and can augment existing people and processes for greater control, consistency and enhanced performance, or expand all the way to full closed-loop automation.

NOVOS by the Numbers*

Over **2 million** feet drilled[†]

Most widely deployed automation system

Over **6,000 days** of operation

* With multiple rigs actively drilling in Texas, Oklahoma, Pennsylvania, the Alaskan North Slope, and Canada.

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Who Is NOV?

We provide the technical expertise, advanced equipment and operational support our customers in the oil and gas industry need to succeed. We have the people, capabilities and vision to serve the needs of a challenging and evolving industry.
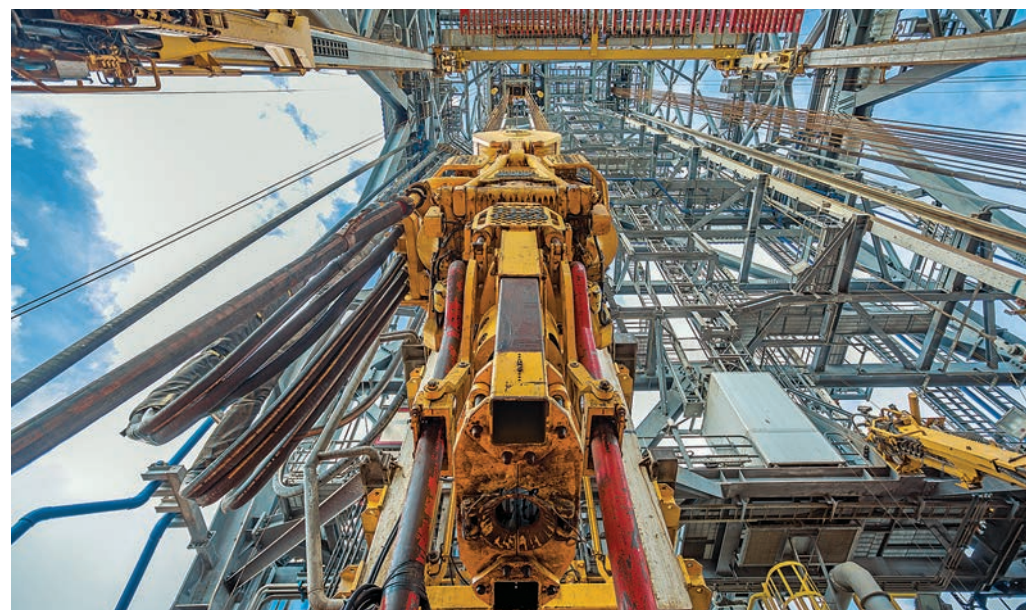
What Is NOVOS?

NOVOS™ is the industry's only reflexive drilling system, automating repetitive drilling activities, benefiting contractors by allowing drillers to focus on consistent process execution and safety, and benefiting operators by optimizing drilling programs.

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Key Benefits

Consistency | Simplicity | Efficiency | Speed | Safety | Economy

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NOVOS Advantages

NOVOS™ provides control and consistency for any operation. It allows drillers to automate repetitive drilling activities, such as coming off and on bottom, friction tests, downlinking, taking surveys, and making fully hands-free offshore connections. The result is greater consistency, with every driller — regardless of individual experience level — able to achieve the same improved performance time and time again.

Precise Control
Set the exact parameters to meet the needs of your drilling program, from circulation to weight-on-bit and everything in between, and the NOVOS™ system performs at the push of a button.

Unmatched Consistency
Regardless of who's at the controls, the NOVOS™ system offers the same performance, again and again, eliminating NPT and protecting your equipment.
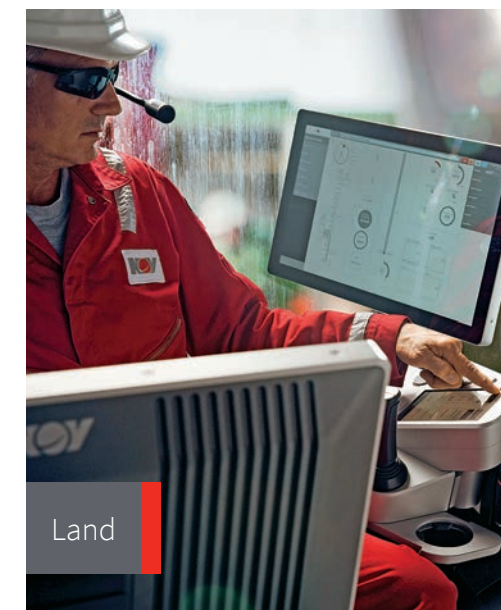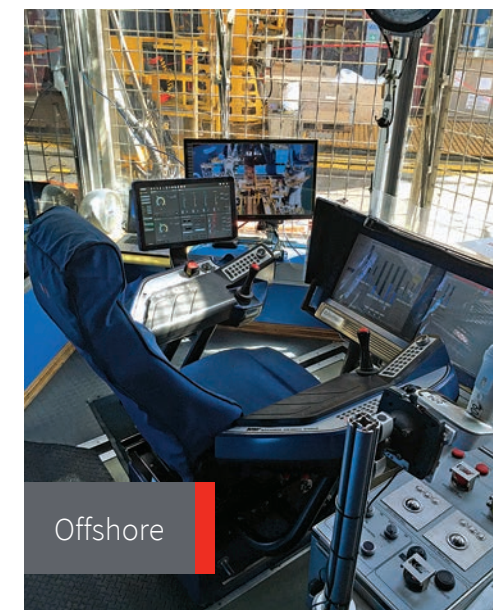
Increased Performance
With more consistency comes greater performance. Because the reflexive system automates repetitive tasks, you'll achieve better average performance throughout the entire drilling lifecycle, regardless of the experience level of the driller.

Infinite Customization
With additional off-the-shelf apps that can be tailored to your needs or completely custom designs, the NOVOS™ system can be updated to meet specific needs with just a bit of software.

Minimal Interruption
The whole system can be installed with minimal interruption and requires limited additional hardware.

Offshore

Land

Open Application Platform

Custom apps can help configure the NOVOS™ system specifically for your crew and processes. Simple, easy-to-understand software development tools help create custom applications for drilling operations on our automation platform. Sample code and supporting technical notes and documentation help you build applications tailored for your drilling program.

Surface DrillShark: Automates drilling parameter selection using unique algorithms to maximize ROP while minimizing Mechanical Specific Energy of the drilling system.

SoftSpeed: Stick-slip prevention uses automated vibration dampening to mitigate torsional vibration and reduce stick-slip oscillations during drilling operations.

Tag Bottom: Users can configure how NOVOS™ lowers the bit into the formation, including drawworks velocity, ROP, and any parameters used for finding the bottom of the hole. NOVOS™ automatically looks for stable weight before ramping off-bottom RPM to on-bottom RPM.

Drill: Autodriller automatically adjusts the drilling set points.

Downlinking: Automates the process of downlinking to a directional drilling tool.

Autodriller Gains Control: Allows driller to control AMPHION™ gains manually.

System Requirements

NOV Controls   NOV Top Drive   NOV Mud Pumps   NOV Drawworks