

**RIGSENTRY™**

condition monitoring family

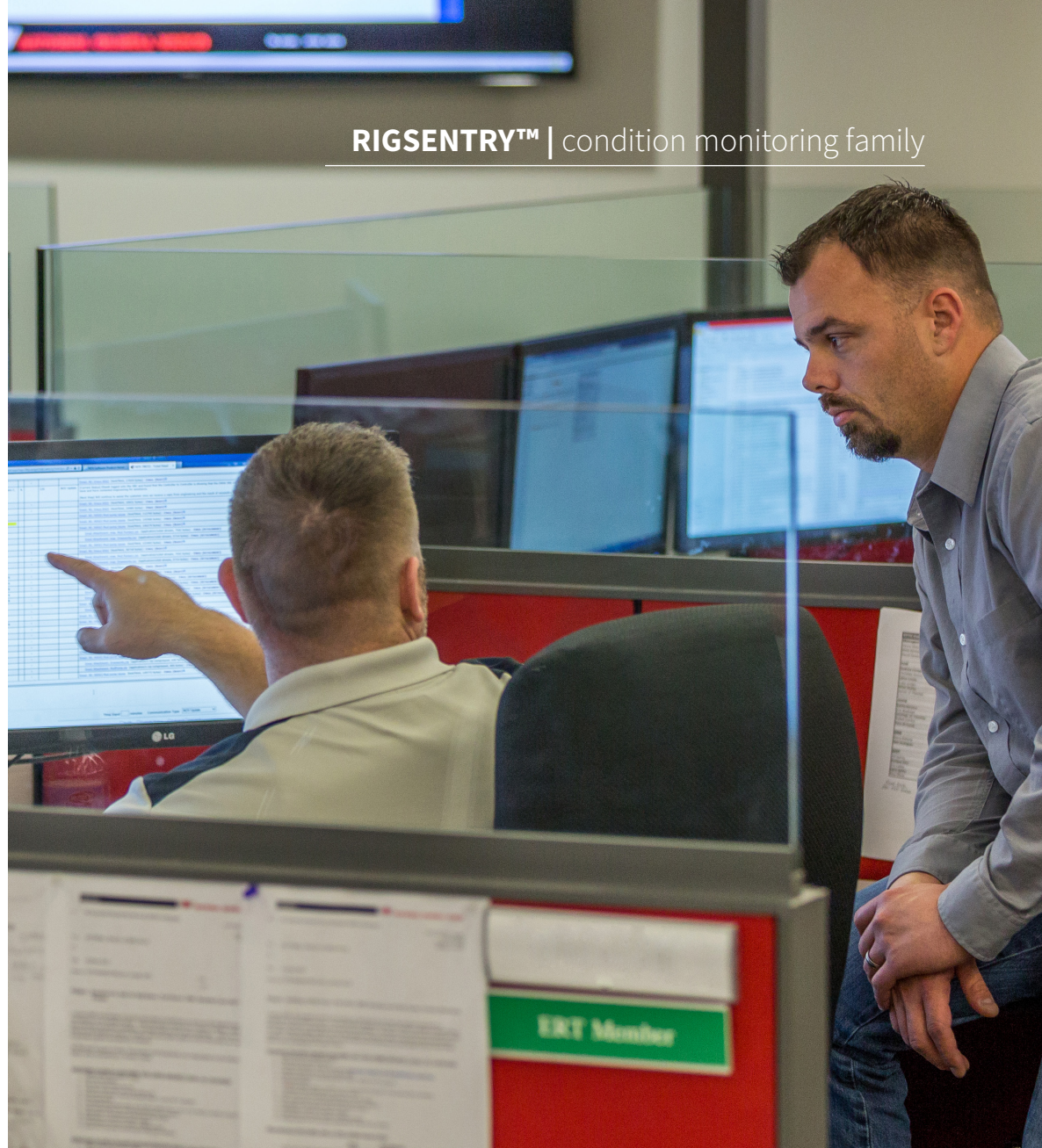




## RIGSENTRY™ Family

Geared towards drilling contractors who are driven to reduce non-productive time and lower maintenance costs, Rigsentry combines OEM equipment knowledge with the MAX™ big data platform to pull value out of your rig data. With solutions for land rigs, topside drilling packages and subsurface pressure control equipment, the Rigsentry family provides detailed insight into the health of your equipment.

- Implement effective condition based maintenance
- Guard against cliff events
- Reduce maintenance costs
- Improve reliability through data
- Differentiate your fleet
- Capitalize on informed decision making
- Utilize big data analytics
- Ensure regulatory compliance



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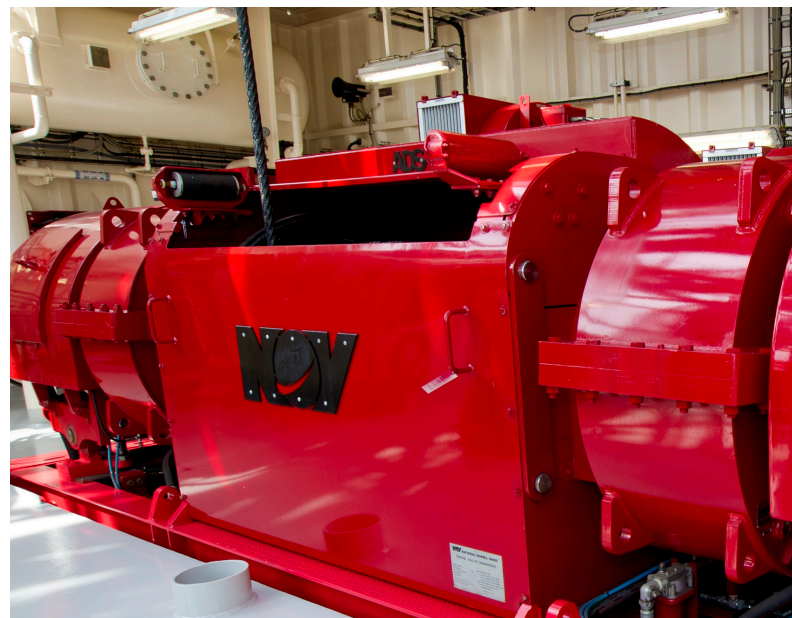
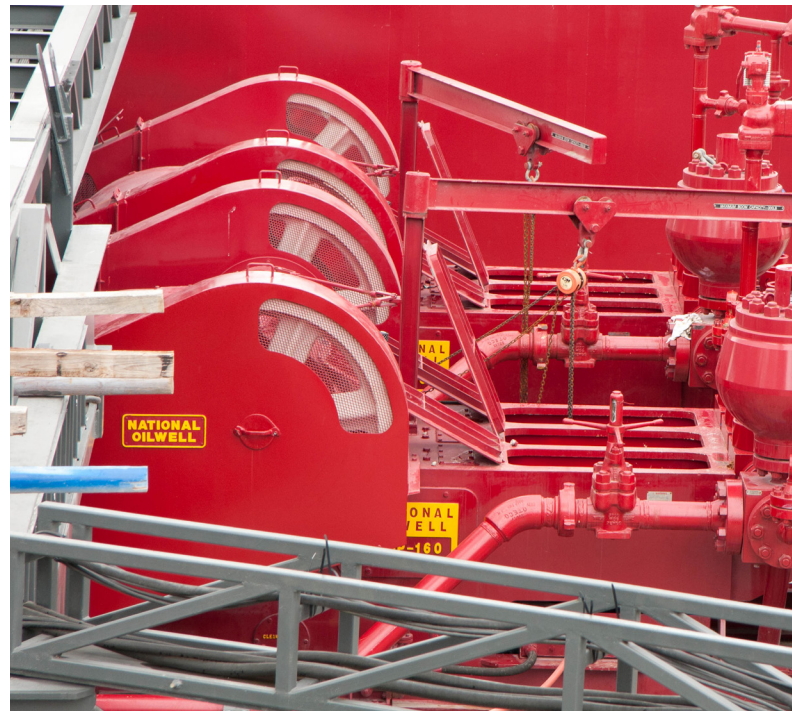
## Rig Monitoring

Rigsentry Rig Monitoring products and services provide a detailed view of the health of NOV equipment and empowers you to operate and maintain it more effectively. Rigsentry bridges the technological gaps between traditional maintenance, CBM, and other maintenance optimization approaches. Accurate information about equipment health enables predictive maintenance programs, contributing toward continuous recertification where major services and overhauls are triggered by equipment condition. The move to a CBM model changes the way you schedule and execute maintenance, helping you spend your maintenance efforts where they count the most.

## BOP Monitoring

Rigsentry BOP Monitoring products and services are designed to facilitate condition based maintenance and to maximize subsea uptime. On the rig, information is collected from the BOP control system to monitor cycle, flow, runtime, and time-in-service data from equipment components. The subsea equipment undergoes constant analysis to detect any latent failures. This includes the compliance with regulatory standards and the statistical likelihood of equipment remaining within your operational limits for the duration of the well. We want to partner with you to create end of well maintenance plans that are tailored to your rig, resulting in a lower total cost of equipment ownership.

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# Rig Monitoring

## Rig Insight

Rig Insight gives you a snapshot of your topside equipment through a network of native and optional CM sensors. Smart notifications turn equipment data into usable condition information based on analytic models designed by experienced equipment engineers. A notification is sent when there is an immediate concern – providing you with inspection instructions or recommend actions. Portal access is available allowing you to visualize equipment data, notification status and reports on demand.

## Rig Predictive

Rig Predictive builds upon the information provided through Rig Insight, and takes you a step further. Predictive analytics provide proactive notifications that warn you of potential failure modes, allowing you to address the problem without compromising safety or the well plan. Incorporating specialized sensors along with wear and fatigue calculations, we monitor and report on equipment lifespan. By using a combination of equipment knowledge, operational data, and condition monitoring data, you can achieve a CBM schedule that aligns with your operational plan.

## Rig CBM Services

As the OEM, we have the most comprehensive knowledge of NOV equipment and systems, down to the engineering tolerances at the component level. Use that expertise to help you estimate when components or systems are nearing their end-of-life or plan an equipment change out or repair. We will work with you to create a tailored program that will reduce the total cost of ownership for your drilling equipment.



# BOP Monitoring

## BOP Insight

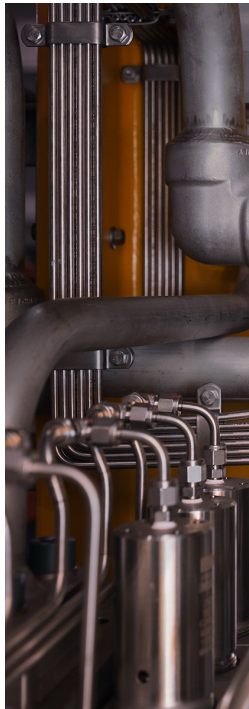
BOP Insight gives you visibility of component life through the use of a logging tool that provides usage calculations for wearable components throughout the BOP and control system. Smart notifications alert your crew when there is a potential concern, aiding them in the proper course of action. Tracking and trending this information allows you meet current regulatory requirements while creating a log of all alarms, events and analog data from the control system. Access to the equipment dashboard view, on the rig and from the shore base, provides you with a visual representation of current system status along with an easy reference of which components are in need of maintenance. Moving from a time-based to a usage-based maintenance plan reduces cost and the time needed between wells.

## BOP Predictive

BOP Predictive services of Rigsentry provide prognostic health management, allowing you to get the full life out of your components. Working with predictive analytics models to pinpoint irregular component behavior, we are able to identify true precursors to impending component failures and provide your crew time to address issues before they become costly events. BOP Monitoring gives you an instant analysis of the system, taking into account existing error conditions. A real-time reliability percentage ensures your minimum operational requirements are being met. A clear understanding of the impact of compound faults allows for timely and accurate decisions.

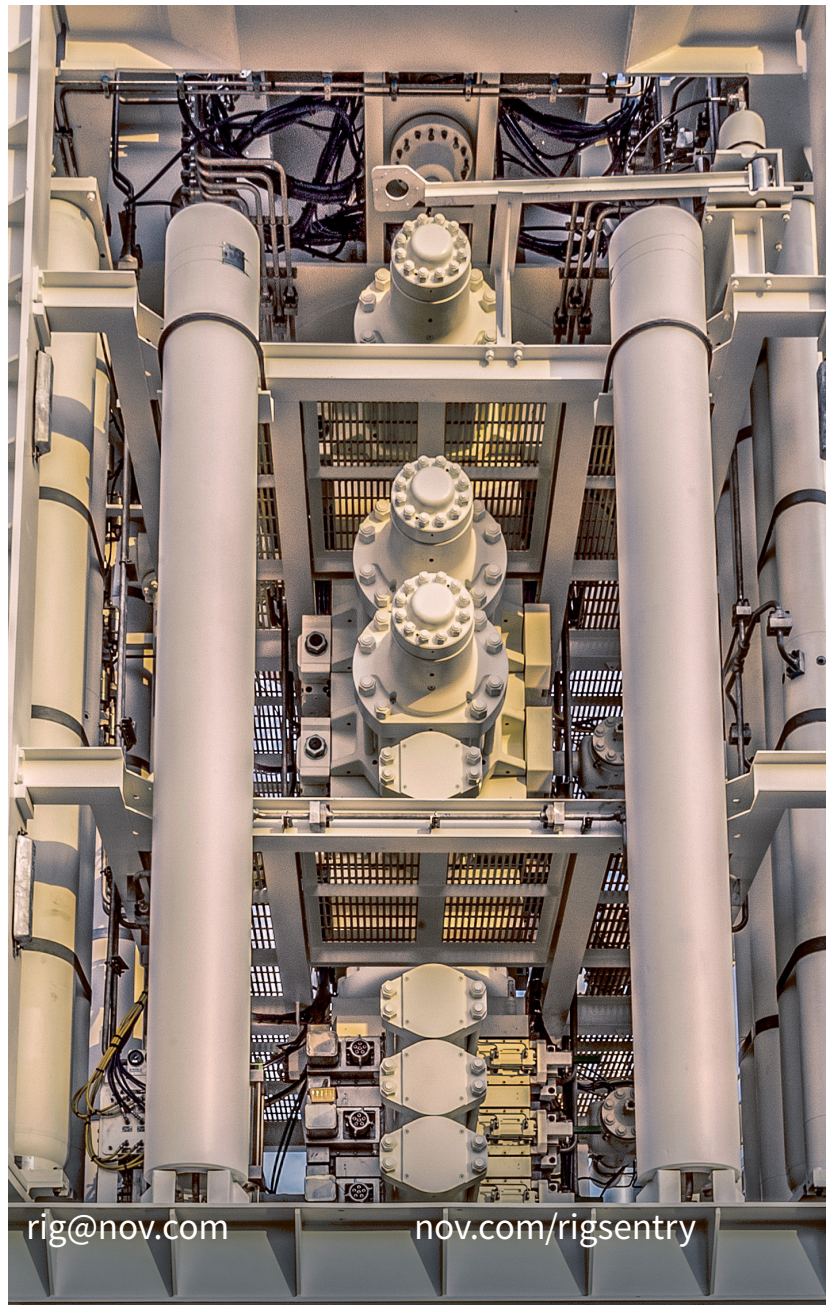
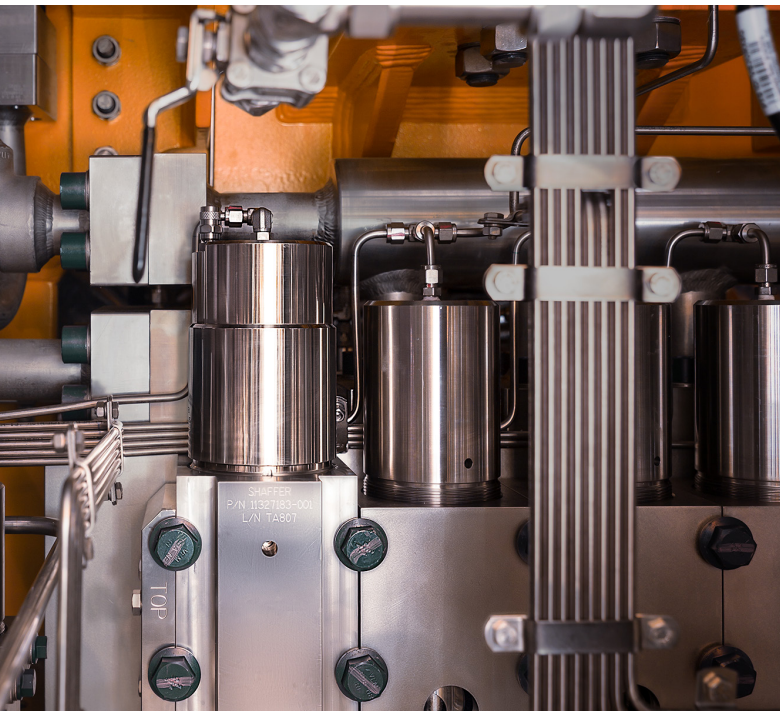
## BOP CBM Services

Normal maintenance procedures were designed using a conservative approach in an era where detailed equipment insight and ongoing equipment health checks were not available. With these tools at our fingertips, condition based maintenance is now possible through a partnership with drilling contractors. The result is a custom maintenance plan at the end of each well that reflects actual equipment condition, often extending maintenance windows and decreasing the amount of money spent on spares.





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