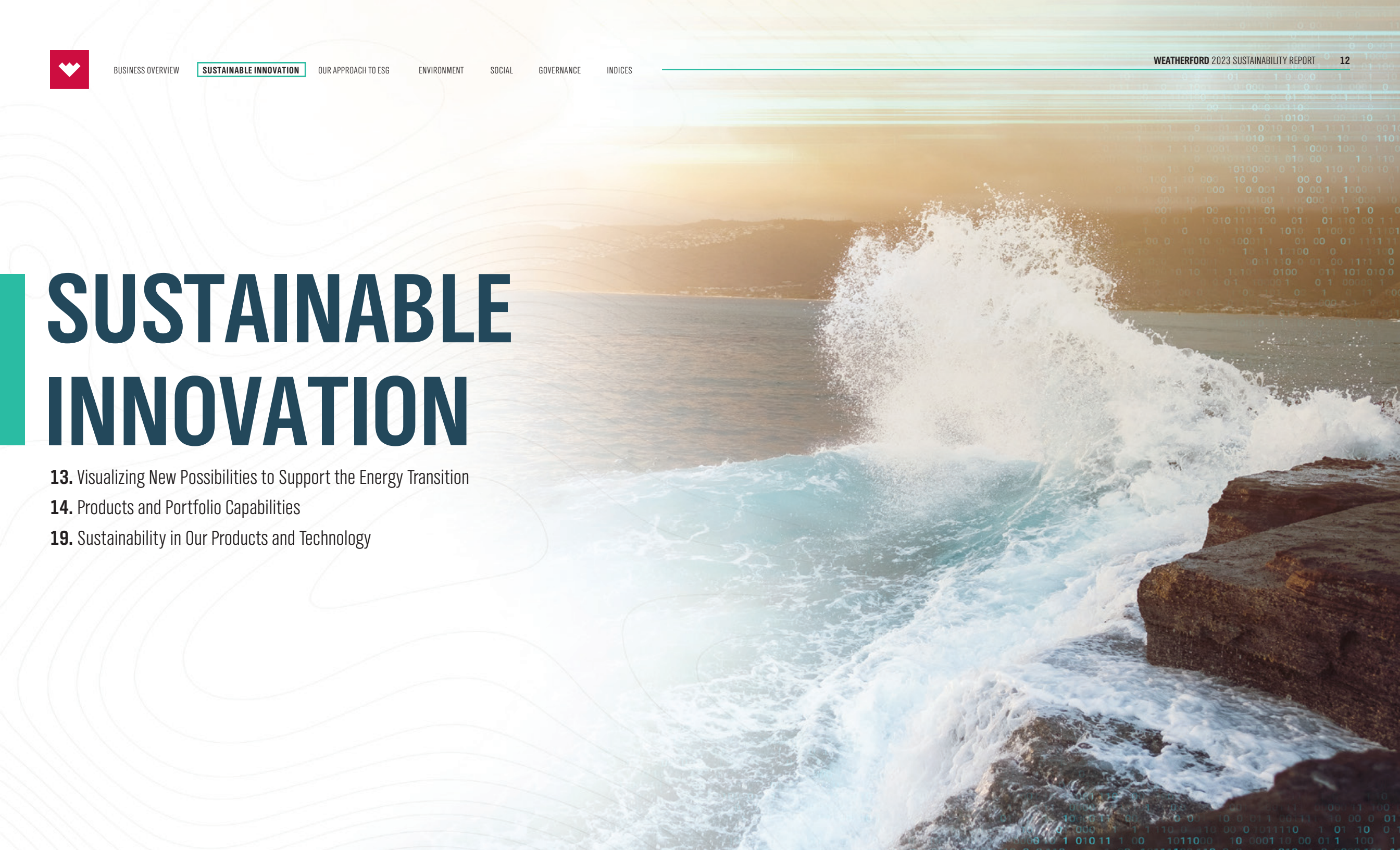




SUSTAINABLE INNOVATION

- 13. Visualizing New Possibilities to Support the Energy Transition
- 14. Products and Portfolio Capabilities
- 19. Sustainability in Our Products and Technology





VISUALIZING NEW POSSIBILITIES TO SUPPORT THE ENERGY TRANSITION

The energy transition to lower carbon and renewable energy is not without challenges, but the answers all start with people. We will embrace the opportunities of a more sustainable world and face the demands, both as a company and as the family of people we call One Weatherford.

In our facilities across the globe, we adopt more sustainable practices like installing energy efficient lighting and regulating water usage. We also see this as an opportunity to channel our traditional energy service technology and expertise to improve the accessibility and viability of renewable sources at scale.

We continue our legacy of innovation—visualizing possibilities, forming partnerships, and making strategic acquisitions that will contribute to new energy solutions. Recent highlights include:

- Weatherford and Honeywell signed a memorandum of understanding that combines Honeywell's Emissions Management suite with our advanced CygNet® SCADA platform to accelerate our customers' decarbonization strategies.
- Our complete portfolio of wireline technologies—including the additions of Impact Selector International and Probe—deliver actionable evaluation information to optimize reservoir performance and guide our customers' life-of-well decisions.
- With the acquisition of Ardyne Technologies and the exclusive casing recovery systems from Trident® and Titan®, Weatherford now represents the world's leading compilation of plug-and-abandonment (P&A) and slot-recovery technologies and expertise—all designed to extend productive well life and maximize asset value before final decommissioning.
- The ForeSite® POWER Regenerative System is the energy industry's first regenerative variable-speed drive for rod lift systems and features the unique ability to recycle, store, and optimize power, helping to control operating expenses while reducing carbon emissions for the ultimate eco-friendly alternative to conventional VSDs and regenerative energy systems.

LOWERING EMISSIONS WITH GREATER EFFICIENCIES

We strive to streamline every aspect of what we do, both through processes and technological innovation to improve our overall efficiency. We recognize that when our technology supports production more efficiently, we help decrease our customers' carbon footprint.

INVESTING IN THE ENERGY TRANSITION

The energy transition is not an overnight shift. It demands a gradual evolution. Progress towards a lower carbon future, powered by sustainable and renewable energy, intertwines with the conventional energy industry. Leveraging our spirit of innovation and the legacy of technology, we are committed to developing lower emissions technology, proactively seeking opportunities for environmental improvements when upgrading existing products, and exploring ways to apply current technologies toward our goals for sustainability and new energy.

PROVIDING AFFORDABLE ENERGY FOR EVERYONE

By directing our expertise into improving ways to acquire hydrocarbons from existing reservoirs, we encourage more well rejuvenation and reduce the emissions caused by new construction.



**Weatherford Geothermal Energy Forum
in Munich, Germany**

In November 2023, we hosted a conference dedicated to building long-term partnerships designed to meet the unique challenges associated with geothermal energy. The meeting showcased not only Weatherford's expertise, specialized technology, and innovative ideation that enables our customers to create a sustainable infrastructure for maximized return on investment, but those of our partners as well, including OMV, the European Geothermal Energy Council, Eavor, Deutsche Erdwaerme, ENEL, and Erdwerk.



PRODUCT AND PORTFOLIO CAPABILITIES

GEOHERMAL ENERGY SOLUTIONS

Increasing Access to Clean, Reliable Energy

Our comprehensive end-to-end solutions are designed to meet the unique challenges of geothermal. Drawing on over 25 years of geothermal experience and collaborating with experts from around the world, we offer efficient high-temperature drilling and advanced digitalization capabilities that optimize sustainable operations and reduce carbon emissions. Our end-to-end solutions are based on specialized technologies and innovation that enable our customers to harness geothermal energy successfully and empower progressive advancement for future geothermal exploration and production.



Moving Geothermal Forward

Partnerships with geothermal technology and energy development partners like Criterion Energy Partners, we are working to increase the production of renewable energy. We also maintain active memberships with organizations such as the [European Geothermal Energy Council](#), the Geothermal Industry Advisory Group, and the [Texas Geothermal Energy Alliance \(TXGEA\)](#) to advocate for geothermal energy.

[Read More](#)



REAL RESULT: Close Partnership, Specialized Technologies, Operational Efficiencies Delivered Three German Geothermal Wells in Record Time

Key to the effective delivery of geothermal wells for our customers is drilling efficiency. Weatherford collaborated with a project management company based in Germany to devise a well plan that featured our field-proven technology that can withstand the harsh downhole environments of geothermal wells. The combined experience and close management and coordination from both teams delivered the project approximately 15 to 30% faster than planned.

[Read More](#)



REAL RESULT: Compact™ Logging Technology Easily Passed Through Collapsed Section in Geothermal Injection Well, Enabled Operator to Develop Forward Plan

A geothermal operator's well plan halted when a section of casing collapsed. Conventional technology proved unsuccessful in finding and diagnosing the location of the damaged casing. Weatherford's field-proven Compact logging technology was able to snake through the collapsed section and log the well from the bottom. Not only did we confirm the collapsed casing was in the 13 3/8-in. section, but we also identified the presence of scaling in the 10 3/4-in. section. This actionable information enabled the operator to revise the well plan and continue operations.

[Read More](#)



Weatherford and Eavor Partnership for the Geothermal Future

For more than two decades, we have delivered successful results in geothermal projects, including entering into a joint development agreement with Eavor, a revolutionary geothermal company, to develop whipstock and sidetrack technology for future projects to reduce overall well construction costs. This agreement bolsters Weatherford's geothermal offering and builds on an existing contract to provide liner hanger systems, cementation products, and open-hole/cased-hole wireline services to support the first commercial Eavor-loop™ in Germany.



PLUG AND ABANDONMENT SOLUTIONS

Mitigating Risk Through Responsible Long-Term Well Integrity Solutions

We recognize the substantial environmental and ecological risk that unplugged wellbores pose, specifically leaking methane into the atmosphere or contaminants leaching into the groundwater. A proper abandonment solution should restore the natural integrity of the formation with a permanent wellbore isolation. Last year, we challenged operators to finish responsibly with the Firma™ Plug and Abandonment Solution, a comprehensive method that simplifies the task of abandonment with a high degree of integrity and put operators' minds and balance sheets at ease.

We have continued this drive to deliver long-term barrier performance with a new thru-tubing P&A solution. The revolutionary well-cessation system enables fast and reliable plug and abandonment operations without the need for high-horsepower rigs or completion-retrievals. By setting cross-annular plugs from the tubing, the thru-tubing P&A solution substantially reduces the time and costs associated with pulling and properly disposing of contaminated tubing. This rigless, thru-tubing process saves valuable time and costs without sacrificing barrier performance—ensuring long-term environmental protection.



Advancing Late-Life Well Management

The acquisition of Ardyne by Weatherford offers a comprehensive portfolio of Plug and Abandonment and Slot Recovery solutions. The acquisition, first established as a partnership in 2022, delivers specialized well-decommissioning solutions designed to tap additional reserves and sustainably abandon nonproductive wells in complex well environments. [Read More](#)

Additional collaboration targets specific geographic aims, such as our partnership with the Center of Decommissioning Australia (CODA), which supports de-risking of Australian operations through various initiatives in the community ecosystem. [Read More](#)



REAL RESULT: Thru-Tubing Plug and Abandonment Solution Prevented Gas Migration in 70-Year-Old Well, Protected Water Table and Avoided Surface Leakage

An operator needed to isolate a permeable and hydrocarbon-bearing formation to protect underground resources in a 70-year-old well. Drawing on our extensive P&A experience, our experts recommended the new thru-tubing P&A solution which created a permanent hydraulic seal in one trip, establishing the barrier without impacting current or future production zones. The single-trip efficiency reduced rig time and associated emissions. Gas migration to the surface was effectively shut off, protecting the underground environment and potable-water resources.



DIGITAL TRANSFORMATION

Digitalization and Automation: Key Enablers for the Energy Transition

Traditional oil and gas production will sustain the world’s overall energy needs for the foreseeable future, but we understand the fundamental role we can play and continuously seek to find new ways to help our customers reduce their carbon footprint and make operations more efficient and sustainable.

Many of our advanced technologies like the Vero® Automated Connection Integrity Solution and the CENTRO® Well Construction Optimization Platform digitize oil fields and automate operations for tangible performance gains. The ForeSite® Production Optimization Platform applies asset-wide data from every well, leveraging the industry’s most advanced real-time analytics and physics-based modeling, to help find and prioritize uplift opportunities for continuous life-of-well performance with a reduced carbon footprint. But the results are not limited to profits and production. Automation decreases field personnel at rig site, and the cascading benefits of fewer people translate into a reduction of the carbon expended to transport, house, and support the crew. The AccuView® Real-Time Remote-Support System, an end-to-end service, spans all well planning and execution phases to enable operations quality, safety, and repeatability anywhere our customers operate. This system also reduces onboard personnel and lowers overall HSE risks.



PRODUCT SPOTLIGHT: ForeSite® POWER Regenerative System

The ForeSite POWER regenerative system is the energy industry’s first regenerative variable-speed drive (VSD) for rod-lift systems, featuring its seamlessly integrated power-management technology. Due to its unique ability to recycle, store, and optimize power, this innovative solution helps control operating expenses while reducing carbon emissions for the ultimate eco-friendly alternative to conventional VSDs and regenerative energy systems.

[Read More](#)



The FWRD Digital Conference

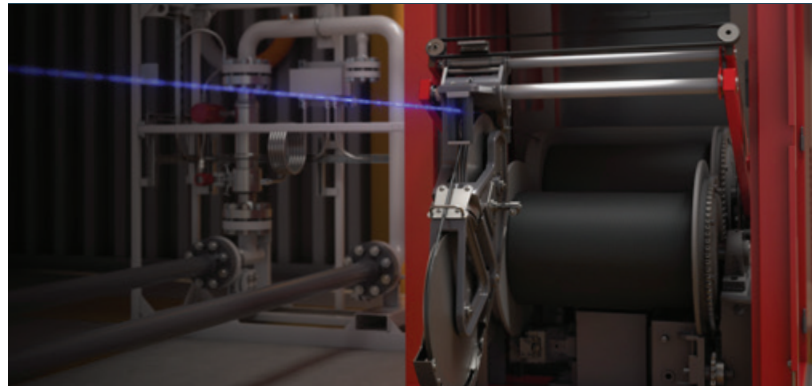
In 2023, we hosted our 19th annual digital conference, with industry representatives, technology partners, and Weatherford technical experts. This edition of the FWRD conference highlighted important subjects related to integrated workflows, implementing advanced control systems, the use of artificial intelligence (AI) to enhance operational efficiency, approaches to reduce carbon emissions through digitalization, and Weatherford’s unique product offerings.



WELL REJUVENATION

Maximizing Recoverable Production and Reducing Carbon Emissions and Resource Use

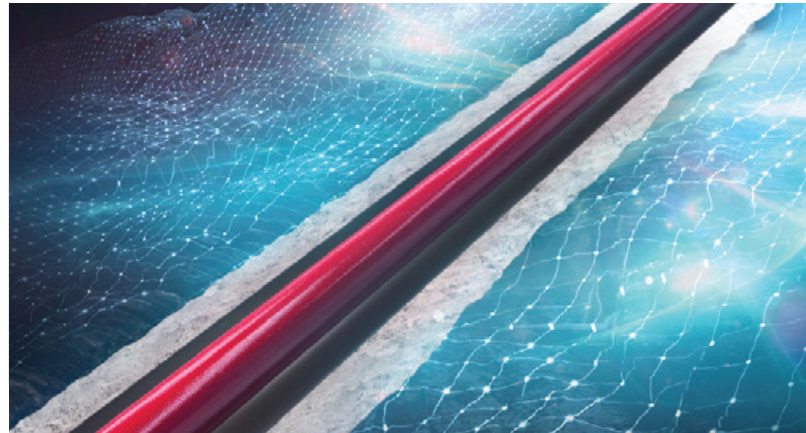
Every well eventually declines. The easy and immediate solution is to drill more wells, but that incurs substantial costs as well as an increase in the overall carbon intensity. In existing wells, most of the emissions to find, develop, and produce the given asset have already occurred. We offer turnkey solutions that diagnose the problem, plan for contingencies, and quickly and cost-efficiently revive underperforming or shut-in wells without environmental risks. We help our customers maintain production performance with a continuous and proactive monitoring, diagnosis, and optimization cycle which includes emissions monitoring.



Innovative Solution/Product Spotlight

The MARS™ Mature Asset Rejuvenation by Surveillance System is the energy industry's most advanced intervention and reservoir data solution. This cost-effective, all-in-one reservoir-surveillance system ensures a continuous stream of actionable well data for critical management and decision-making. MARS decreases production costs in operational wells by precisely positioning fluids and, maximizes performance at production intakes throughout the entire reservoir. Real-time well intelligence data enables proactive remediation of challenges for rigless intervention efficiency at any operational stage. Rigless operations and reduced footprint delivers well intelligence across the reservoir. This provides tailored monitor/intervention periods for streamlined operations, reduced OPEX, and decreased environmental impact.

[Read More](#)



Memory Raptor® Cased-Hole Evaluation System

Our Memory Raptor system reveals and quantifies what lies behind casing, enabling our customers to detect bypassed reserves with accurate through-casing reservoir characterization. The winner of the Offshore Technology Conference Asia (OTC Asia) Spotlight on New Technology award in 2022, the Memory Raptor system delivers the same quality data as conventional wireline technology but without the equipment and crew requirements, effectively extending the life of existing assets with a lower carbon footprint.

[Read More](#)

METHANE EMISSION MITIGATION

Measurement for Better Management

Identifying methane emissions, quantifying them, and determining the most effective remediation methods remain constant challenges for the industry. Energy companies have the technical abilities to monitor, manage, capture, and mitigate emissions most effectively. Weatherford is committed to managing and mitigating methane emissions.

The Emissions Manager enables continuous monitoring and reporting of potential methane leaks using the premier CygNet platform already available on the majority of gas-producing sites. The fast leak detection and reporting technology saves operators from costly fugitive methane emissions fines and enables preventive maintenance, thereby reducing overall production loss.



Partnership with Honeywell

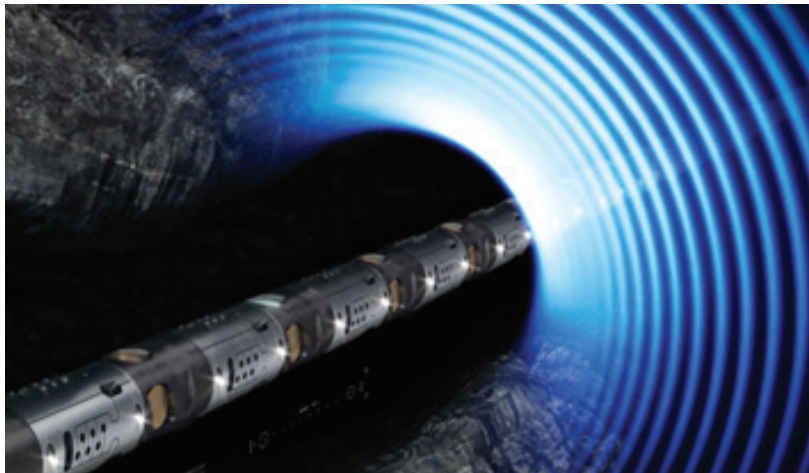
Honeywell's Emissions Management suite measures, monitors, reports, and ultimately reduces greenhouse gas emissions using a programmatic approach to decarbonization. It supports data accuracy, early detection and remediation, stakeholder transparency, and actionable insights. Our CygNet™ SCADA platform collects, manages, and distributes critical data across our customers' enterprises, empowering our customers to make strategic decisions that keep them informed, in control, and on target. Together, these technologies, and the innovative experts who created and sustain them, form a premier solution that surpasses EPA regulation standards for full compliance.



SOLUTION MINING

The global mining industry faces similar goals and challenges on environmental stewardship. These challenges require mining to adopt new methods and approaches to managing on-site operations, the utilization of technology, and the incorporation of the massive amount of data gathered.

Leveraging more than 50 years of experience delivering innovation and technology, Weatherford is strategically aligned to deliver a much-needed competitive advantage to the solution mining sector. Solutions in the form of new corporate strategies, innovative methods for increasing productivity, improving safety, and lessening environmental impacts are all integral to Weatherford's commitment to eliminating heavy machinery emissions, improving mining's sustainability, and keeping the earth intact. From advanced data analytics support for risk-reduced decision making to resolving complex subsurface lithology, together with our customers, we strengthen and evolve the mining sector's value chain to improve financial returns and environmental stewardship.



Lithology and Formation Evaluation are the Cornerstone of Mining Operations

Subsurface assets are continually exposed to the dynamic stresses of ongoing operations yet must maintain structural integrity throughout the asset lifetime to mitigate potential environmental impact. Weatherford's integrated multidiscipline geoscience teams stand at the forefront of formation characterization. Seamlessly integrating predictive algorithms and advanced modeling into characterization of all formation and reservoir data, our experts provide analytics-driven solutions for the mining sector that reduce uncertainty in the decision-making process and mitigate risk. [Read More](#)



Digitalization and Automation Streamline Mining Operations

With dynamically different pressure, temperature, structural, and fluid characteristics, no two reservoirs will behave or react to induced pressure changes the same. The CENTRO platform and AccuView system provide seamless wellsite integration of data and services, ensuring real-time management of all aspects of well construction and providing the mining sector the ability to directly control dynamic downhole variations with minimal risk. ForeSite technology implements advanced data processing technology to consolidate the monumental amounts of data gathered across remote mining locations, streamlining the decision-making process and removing geographical silos. [Read More](#)



Wireline's Role in the Lifecycle of Critical Mineral Assets

Weatherford's extensive portfolio of progressive openhole and cased-hole wireline services seamlessly integrates with localized Interpretation and Evaluation Service teams to provide the mining industry with the latest in advanced lithology and mineralogy evaluation services.

The recent acquisitions of Probe, Ardyne, and Impact Selector expand our comprehensive portfolio to further support our mining customers focus on continued growth that is both financially and environmentally sustainable.



SUSTAINABILITY IN OUR PRODUCTS AND TECHNOLOGY

Last year, we listed many traditional technologies that were being repurposed toward new energy transition applications that save on resources, mitigate emissions, and support our geothermal and CCS new energy goals. This year we're proud to be able to add several new technologies to that list that demonstrate our continued investment in the transition. [Learn more about our portfolio capabilities.](#)

DRILLING AND EVALUATION					
ENABLING TECHNOLOGIES	PRIMARY AREA OF IMPROVEMENT IMPACT				APPLICATION*
	WATER/WASTE	ENERGY	EMISSIONS	SAFETY	
Downhole Deployment Valves	•	•	•	•	GT, CCS
PressurePro® MPD System	•		•	•	GT, CCS
Magnus® RSS	•	•	•	•	GT, CCS, MM
HeatWave® Service	•	•	•	•	GT
RipTide® Underreamer		•	•	•	CCS
GAPS® Service		•		•	
Memory Raptor® System	•	•	•	•	CCS
SecureView® Cement Evaluation		•	•	•	
CENTRO® Optimization Platform	•	•		•	WR
Modus™ Managed Pressure Wells Solution NEW	•	•	•	•	GT, CCS, MM
Probe ProTherma™ Geothermal PTS NEW		•			
Probe Ultra-High Temperature Dimension™ X-Y Caliper NEW					GT
Probe Geothermal Battery Packs NEW		•	•		GT
Probe Quantum™ Geothermal PT Gauge NEW		•			GT
Probe Quantum™ Geothermal PTS Gauge NEW		•			GT
Probe Depth Logger & Encoder NEW		•			GT
WEL-Hib™ Inhibitor NEW	•	•			
Integrated Solutions NEW	•		•	•	WR

WELL CONSTRUCTION & COMPLETION					
ENABLING TECHNOLOGIES	PRIMARY AREA OF IMPROVEMENT IMPACT				APPLICATION*
	WATER/WASTE	ENERGY	EMISSIONS	SAFETY	
Vero® Connection Integrity		•	•	•	GT, CCS
Mechanized Services		•	•	•	GT, CCS, P&A
COMPLETE SM Post-TD Solution		•	•	•	GT, CCS
TR1P™ Single Trip Completions	•	•	•	•	MM
RFID Completions		•	•	•	MM
Electric Completions	•	•	•	•	CCS
ESS® Expandable Sand Screens	•	•	•	•	CCS
Alternative Gas Lift Completion Systems	•	•	•	•	
Completions: New Energy Applications		•	•	•	GT, CCS
Renaissance™, Inverted Gas Lift, Deep Gas Lift, Foam-lift Capillary Services	•	•	•	•	WR
ForeSite® Sense NEW		•			GT, CCS
Reclaim™ Thru-Tubing P&A NEW	•	•	•	•	P&A
MARS™ Mature Asset Rejuvenation by Surveillance NEW				•	WR
Tubular Running Assurance NEW				•	
VERO® OneTouch System NEW			•	•	
MetalSkin® Solid Expandable Tubular Systems NEW			•		WR
Multi-Stage Cementing and Accessories NEW		•	•		GT
SOLOIST™/ENFORCE™ Services NEW			•	•	
FloReg ICV NEW			•		
Integrated Solutions NEW	•		•	•	WR

PRODUCTION & INTERVENTION					
ENABLING TECHNOLOGIES	PRIMARY AREA OF IMPROVEMENT IMPACT				APPLICATION*
	WATER/WASTE	ENERGY	EMISSIONS	SAFETY	
Permanent Magnetic Motor (PMM)		•	•	•	
Rotaflex® Long Stroke Pump		•	•	•	
COROD® Continuous Sucker Rod		•	•	•	
Plunger Lift		•	•		GT, CCS, MM
Electric Actuated Motor Valve		•	•	•	
DuraSeal® Stuffing Box	•		•	•	
Firma™ P&A Solutions	•	•	•	•	P&A
AccuView™ for Remote Operations		•	•	•	GT, CCS, P&A
ForeSite® Platform	•	•	•		GT, CCS, MM, SM
ForeSite® FLOW		•	•	•	
Foresite® EDGE		•	•	•	
Foresite® SENSE		•	•	•	CCS, MM
ForeSite® POWER Regenerative System NEW		•	•	•	
CygNet® SCADA Platform		•	•	•	GT, CCS
Amplifrac® Fluid	•	•	•	•	
TBlockSure® Diverting Agent	•			•	
Emissions Manager NEW			•	•	CCS, MM
Ardyne Trident® Casing Recovery System NEW			•	•	P&A
Ardyne Titan® Casing Recovery System NEW			•	•	P&A
Ardyne Shogun® Casing Recovery System NEW			•	•	P&A
Integrated Solutions NEW	•		•	•	WR

*Energy Transition Offerings Application

GT - Geothermal MM - Methane Mitigation WR - Well Rejuvenation
 CCS - Carbon Capture and Storage P&A - Plug and Abandonment SM - Solution Mining