



# North America Plug and Perf

ENABLING COMPLETIONS EXCELLENCE

**HALLIBURTON**



# Engineered Efficiency and Proven Safety

Plug-and-perf operations are a small but critical part of the completion process. Flawless execution is crucial to ensure an efficient stimulation operation and avoid potential costly remediation work.

As the world's largest pressure pumping company and one of world's largest providers of plug-and-perf services, Halliburton has the right people and best technology to safely maximize surface efficiency with even the most customized stimulation program.

We are ready to collaborate with you and apply our engineered solutions to maximize your asset value.





Safely run simultaneous hydraulic fracturing and wireline operations



# ExpressKinect™ Quick Latch

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## MAXIMIZING SURFACE EFFICIENCY, SAFELY

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Legacy connections between the wireline pressure-control equipment and the wellhead require personnel working at heights to manually connect and disconnect a threaded connection before and after each fracturing stage. The ExpressKinect™ Quick Latch (EKQL) replaces the threaded connection with a remotely operated hydraulic connection for a much safer, more efficient operation.

### Features

- » Remote connection to wellhead
- » Compatible with ExpressKinect Wellhead Connection Unit

### Benefits

- » Faster stage transition times
- » Improved operational efficiency
- » Reduced HSE exposure



## Engineered and Manufactured Perforating Solutions

Located on over 800 acres in north central Texas, the Halliburton Jet Research Center (JRC) is the forefather of jet perforating to the energy industry.

North America plug-and-perf operations have leveraged this incredible resource to create the industry-leading modular Velocity™ perforating system.

Consistently operating at over 400 runs to misrun, this system allows you to perforate with confidence, every time.



# Velocity™ Perforating System

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## SHOOT WITH CONFIDENCE, EVERY TIME

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Shorter and lighter than traditional systems, the Velocity™ perforating system can be rigged up more quickly, keeping with our high safety standards. Our proprietary system does not require any field wiring of guns, detonators, or igniters. Guns and switches are tested and verified on surface before running in hole. The unique modular design of the Velocity system decreases preparation time and simplifies the perforating process, ensuring successful operations.

### Features

- » Push-in detonator and igniter
- » Prewired for reliability
- » Digital switch technology
- » Accepts MaxForce®-FRAC and other perforating charges

### Benefits

- » Reduced misrun rate
- » Faster stage transition times and improved operational efficiency
- » Shorter overall length



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# EcoSeal Greaseless Wireline

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## PERFORMANCE AND RELIABILITY, ALL WITHOUT GREASE

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Halliburton is excited to offer the field-proven EcoSeal\* greaseless wireline. Operators no longer require traditional pressure-control equipment, creating a spill-free and safer worksite. In addition, flow tubes and extended lubricators can be eliminated. Its smooth technology allows for higher running speeds without compromising the effective barrier, and the dual-polymer coating eliminates common cable problems, including birdcaging, stranded wire, and loose armor wires.

### Features

- » Reduced friction from smooth jacket profile
- » Torque-neutral armor design
- » Pressure rated up to 15,000 psi

### Benefits

- » Eliminates traditional grease pressure-control equipment
- » Enables higher running speeds without torque issues
- » Improves operational efficiency and mitigates nonproductive time

\*EcoSeal is a registered trademark of Camesa





# Mark 1 Plug-and-Perf Command Center

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## OPTIMIZED MOBILE OPERATIONS

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Traditional wireline operations on land are performed using a custom truck, which integrates the wireline spool and transport capability in one unit. Halliburton has challenged the norm with the Mark 1 Plug-and-Perf Command Center, stripping away all the complexity of a truck and focusing solely on reliability, safety, and plug-and-perf efficiency.

The open back and winchman's operating cockpit of the Mark 1 Plug-and-Perf Command Center allows for a 180° view for safer winch operation in today's complex zipper-well environment. It's powered by an integrated 173HP power pack.

### Features

- » Modular component with Hagglund drive, super quiet inside the cabin
- » 180° visibility from operational console
- » Pivoting drum and auto spooler

### Benefits

- » Ability to manage multiple zipper wells at an angle without respotting
- » Improved reliability and wellsite functionality
- » Improved safety and efficiency







# Remotely Operated eWinch

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## INTEGRATED PLUG-AND-PERF WINCH SYSTEM

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Taking innovation one step further and enabling a truly integrated wellsite, the remotely operated eWinch is a powerful electric-drive system mounted to a flatbed trailer. The eWinch can be controlled either from a custom integrated frac Technical Command Center (i-TCC) or in rigup and rigdown conditions from the portable remote-control console.

The Halliburton remotely operated eWinch system is integral to creating a single team at the wellsite, enabling your well's performance. The i-TCC comingles wireline and hydraulic fracture operations into a single collaborative workspace, giving customers a single crew on the wellsite performing their operation.

With significantly less moving parts than a traditional wireline truck and being electric drive, the eWinch requires almost no maintenance, enabling superior performance with virtually no downtime.

### Features

- » Electric powered
- » Auto spool
- » Pivotal drum
- » Minimal wellsite footprint

### Benefits

- » Environmentally friendly, reliable operation
- » Efficient switching between zipper wells
- » Enables truly integrated frac and wireline crew

# Halliburton Integrated Well Completions

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## LEADING-EDGE INTEGRATED SOLUTION FOR WELL COMPLETIONS

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Often, operators contact, negotiate with, and manage several service providers during a well completion project. And, because those service providers operate independently, they require a lot of redundant personnel and equipment at the wellsite. This large footprint can have a negative impact on efficiency and may unnecessarily increase HSE exposure.

The **Halliburton Production Enhancement** and **Wireline and Perforating** product lines have teamed up to offer this differentiated completions solution. Executing at the wellsite as a single integrated crew, operators can now schedule and manage many aspects of a well completion job through a single point of contact. The wellsite teams are specifically trained to operate as a single cohesive crew. By integrating our latest engineered technology solutions, you can be assured that Integrated Well Completions crews will achieve operational efficiency.



Latest  
Technologies

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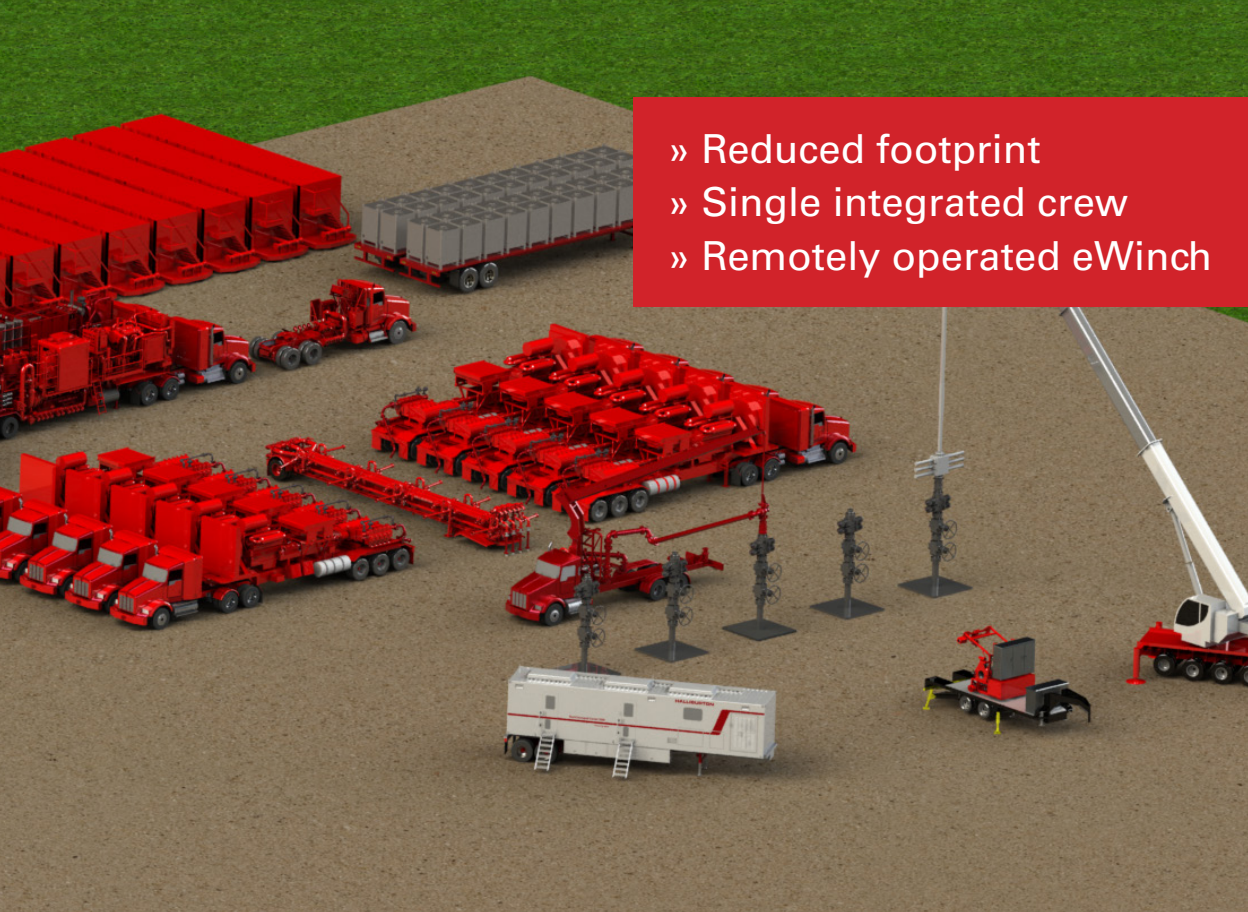


Dedicated  
Multiskilled Crew

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Operational  
Efficiency

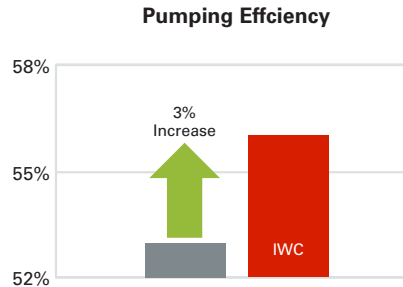
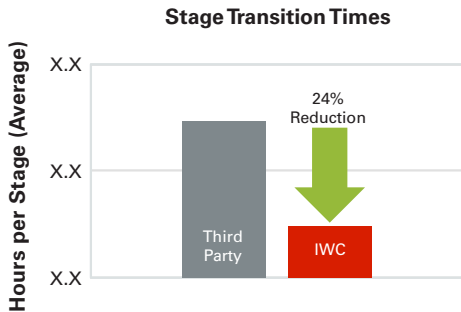


- » Reduced footprint
- » Single integrated crew
- » Remotely operated eWinch

# Case Study

## INTEGRATED WELL COMPLETIONS (IWC) PERFORMANCE

Halliburton customers trialed the IWC concept on 10 frac spreads in 2019. These Red-on-Red crews (Halliburton frac crew with Halliburton wireline crew) applied key efficiency-enabling technologies, and the result was to significantly outperform the Halliburton frac crews using third-party providers. Red-on-Red crews showed a 24% reduction in stage transition times, helping net a 3% increase in pumping efficiency (pumping time/total time).



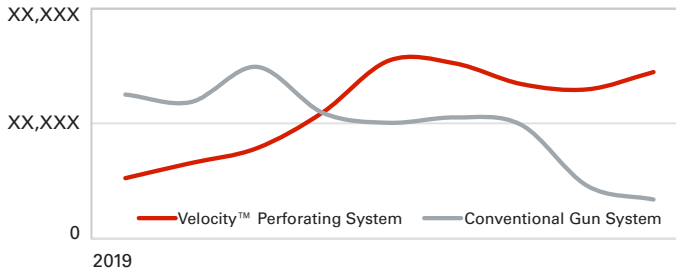


# Case Study

## VELOCITY™ PERFORATING SYSTEM

The latest generation of the Velocity™ perforating system was recently released to the market. Benefiting from superior performance and reliability, Velocity monthly gun consumption tripled, overtaking lower-performing conventional systems. Driven by run-to-misrun performance in excess of 400 and the ease in which the system is deployed in the field, the Velocity perforating system is quickly becoming the perforating system of choice for many customers.

**Plug-and-Perf Perforating Gun Usage**





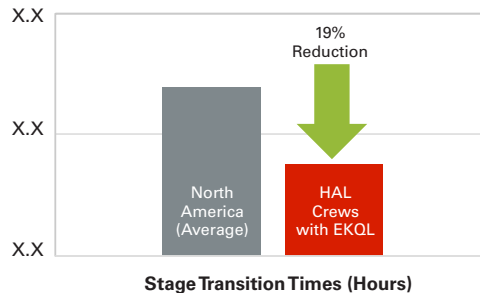
# Case Study

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## EXPRESSKINECT™ QUICK LATCH

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Maximizing surface efficiency safely is the value delivered when customers use the ExpressKinect™ Quick Latch (EKQL) system. Now being used on over 1/3 of Halliburton frac locations, the EKQL system has enabled dramatic time savings and safety improvements at the wellsite. Stage transition times on wellsites using the EKQL system averaged 19% lower.



# Case Study

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## **BREAKING RECORDS FOR STARTUP CUSTOMER**

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Halliburton plug-and-perf crews enable completions excellence. We prove this every single day we have the privilege to operate for our customers. What sets Halliburton apart is the experience and professionalism of our crews, even when starting up for a new customer. The following testimonial exhibits the type of performance that can be expected when bringing Halliburton to location.

Completions Manager, North America Land Customer, stated, "As we wrap up July and head into August full steam ahead, I wanted to reach out and highlight a couple of significant accomplishments. The first and most noteworthy accomplishment is the Halliburton plug-and-perf crew with Halliburton frac crew completing more stages, proppant, and fluid in a month than any other crew ever has. Totals are 183 stages, 113-million pounds of proppant, and 1.9-million barrels of fluid. This beats the previous record of 175 stages set in May 2018. It's worth noting that this comparison is inclusive of all pressure-pumping providers that have ever put stages in the ground for us. What makes this even more impressive is that July was the first full month this crew had worked on our wells."

For more information, contact your local Halliburton representative or visit us on the web at [www.halliburton.com](http://www.halliburton.com)

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

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