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PF HOLDINGS

# ProFrac and Seismos Deploy Closed-Loop Fracturing at Commercial Scale Using Direct In-Well Measurements

WILLOW PARK, Texas and AUSTIN, Texas, March 12, 2026 /PRNewswire/ -- ProFrac Holding Corp. (NASDAQ: ACDC) ("ProFrac"), in partnership with Seismos, Inc. ("Seismos"), announced today the successful completion of their fully closed-loop fracturing program, demonstrating the first real-time, intra-stage optimization utilizing in-well subsurface measurements and immediate surface actuation. The program took place in the Eagle Ford & Austin Chalk basins with a 4-well pad configuration. From February 13 to March 4, 2026, 183 stages were completed utilizing the ProFrac-Seismos leading-edge, closed-loop fracturing technology.




Unlike systems that rely on offset well measurements to infer treatment well performance, this approach focuses directly on the targeted asset, the treatment well. It tracks subsurface performance through direct in-well measurements while pumping, detects deviations algorithmically, executes corrective action instantly, and validates the response within the same stage at any point. During deployment, average response time from data acquisition to automated treatment adjustment was under five minutes, with future targets below two minutes.

Industry research shows improved cluster-level fluid distribution, currently measured exclusively by the ProFrac-Seismos closed-loop system, can increase productivity by up to 20%, highlighting the value of real-time measurement and adjustment. These findings align with a recent URTeC study (Craig Cipolla et al. – URTeC 4044071, 2024), which quantifies the value of achieving uniform fluid distribution across all clusters.

**Intervention Methodology and Execution**

The ProFrac-Seismos closed-loop control logic activated when intra-stage performance deviations were detected against defined envelopes and triggers. When criteria were met, the Seismos proprietary measurement system (SAFA™) and completion logic prescribed corrective interventions, and ProFrac's surface automation system (ProPilot®) executed coordinated adjustments during the active stage.

Primary triggers included mid-stage perforation efficiency falling below the 70% threshold or a rapid PE degradation trend detected during the active stage. In response, surface parameters adjusted intra-stage included rate adjustments to improve cluster stimulation, friction reducer adjustments to maintain stable treating pressure, and other operational parameters controlled by ProPilot®.

As a result of the closed-loop optimization process, stages with intra-stage interventions experienced an additional 7% improvement in mid-stage perforation efficiency and 7.5% improvement in end-of-stage perforation efficiency compared to stages without intervention. There were no screen-outs attributable to intra-stage intervention adjustments and no additional non-productive time (NPT) introduced.

**Why ProFrac-Seismos Closed Loop is a step change**
Traditional frac execution often relies on treating pressure and post-job interpretation to infer downhole performance. Attempts to optimize the treatment well using offset responses face natural limitations because the treatment well lacks critical direct measurements indicative of performance. The ProFrac-Seismos closed loop changes that model by using real-time in-well measurements to guide decisions so treatments can be optimized as they are executed. Its integrated architecture is designed to scale control and learnings across stages and pads, combining real-time execution with a continuous improvement loop for design and operational decisioning.

Matt Wilks, Executive Chairman of ProFrac Holding Corp., stated, "Closed-loop fracturing begins with accurate, real-time subsurface measurements, but its full value is realized when that intelligence drives coordinated surface execution. Through ProPilot® surface automation and selective chemistry integration, we are enabling true intra-stage adjustments at scale and advancing the industry's first fully integrated closed-loop fracturing architecture. We cannot change the resource itself. However, we know that as many as 35% of perforations remain closed after completion operations. Machina™, our well optimization suite, exists to help operators access that remaining 35% and maximize the productive potential of every stage."

**Controlling the Frac Outcome**
"We are no longer just measuring the well; we are controlling the frac outcome," said Panos Adamopoulos, Founder and CEO of Seismos. "Seismos, with its proprietary measurements and completion logic systems, is the core intelligence layer that makes Closed-Loop Fracturing possible. By standardizing on Uniformity Index (UI) as the primary control metric, we ensure consistent, precise execution across all crews and basins, aligning real-time work with measurable production drivers."

**About ProFrac**
ProFrac Holding Corp. is a technology-focused, vertically integrated and innovation-driven energy services holding company providing hydraulic fracturing, proppant production, related completion services and complementary products and services to leading upstream oil and

natural gas companies engaged in the exploration and production of North American unconventional oil and natural gas resources. ProFrac operates through four business segments: Stimulation Services, Proppant Production, Manufacturing, and Other Business Activities. For more information, please visit ProFrac's website at www.PFHoldingsCorp.com.

**About Seismos**
Seismos delivers actionable data intelligence across the energy infrastructure, enabling greater situational awareness, confident decision-making, and superior performance. The company pioneered real-time frac optimization in 2018, which led to its portfolio of Closed-Loop automation, including physics-based subsurface measurement technologies, advanced completion logic systems, AI-based frac advisory systems and a vast data repository of hundreds of thousands of stages.

View original content to download multimedia:https://www.prnewswire.com/news-releases/profrac-and-seismos-deploy-closed-loop-fracturing-at-commercial-scale-using-direct-in-well-measurements-302711564.html

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