

Packers Plus Advanced Systems

High Density

Our StackFRAC® HD™ "High Density" system provides more stimulation intervals through improved staging technology. With the addition of RepeaterPORT™ sleeves, you can further multiply the number of stages in each system. StackFRAC HD technology allows you to increase your production by running longer laterals with shorter stage lengths, while reducing costs by decreasing completion times and using smaller frac strings/liners and less fracturing fluids.

HPHT

Our StackFRAC Titanium™ XV HPHT system is designed to provide open hole fracturing for differential pressures up to 15,000 psi and extreme bottom hole temperatures (BHT). This high pressure, high temperature (HPHT) system accommodates a number of fracturing conditions and requirements, and contains premium seal technology throughout. This system gives you the option to frac at higher treating pressures in a variety of well conditions.

Multi-laterals

Packers Plus open hole systems provide an excellent opportunity to complete two or more laterals off of one vertical wellbore. Dual and multi-laterals greatly reduce upfront capital costs as the majority of drilling cost resides in the vertical portion of the well. Additionally, reservoir drainage is effectively doubled or tripled due to the increased reservoir contact along the entire wellbore of each lateral. Packers Plus has completed over 200 multi-lateral legs. We have the experience and know-how to ensure operational efficiency and return on investment.

StackFRAC Achievements

Deepest (MD)	22,200 ft / 6,775 m
Deepest (TVD)	14,800 ft / 4,500 m
Longest System Length	11,425 ft / 3,500 m
Highest Initial Production	10,000 BOPD; 60 MMcf/d
Number of Stages	47 stages installed
Highest Number of Packers	47
Highest Proppant	>5 MMlb
Longest Stimulation Time	32 hrs continuous pumping
StackFRAC systems	>4,000 (>30,000 fracs)
Multi-Laterals	>200 legs installed (dual and triple lateral
As of June 2010	

As of June 201

Packers Plus takes the lead developing new, innovative solutions for the oil and gas industry. Contact us today to learn how we can deliver systems, experience and service for you.

Pioneers of Multi-Stage Fracturing Technology

With locations in Canada, the U.S. and internationally, Packers Plus is unlike any other completions company, having pioneered multi-stage fracturing systems. Our founders designed and developed our flagship StackFRAC system in 2001 as a customized solution for an operator working in Texas. Ingenuity in product design combined with high-quality service and a clear understanding of the needs of oil and gas producers sets us apart.

Research and Development

R&D is a key focus of Packers Plus to drive innovative, new product design as well as to continually improve the performance of our current product line. This focus results in new tools and products being invented, prototyped and tested for the expanding needs of the multi-stage fracturing arena. Our R&D engineers can quickly respond to specialized applications.



Sales

Our sales team builds solid working relationships with our customers. We work hard to fully understand the needs of our clients, know their goals and objectives, and use our technology to provide a high-value solution. The Packers Plus Sales Group has extensive field experience and plays a major part in the design, implementation and operation of our systems.

Technical Support

Packers Plus provides unparalleled access to technical expertise at all stages of a job, giving our clients reliable, repeatable results. We work with you throughout the entire process, from initial meetings to project sign off, on-site implementation and wrap up. Technical Services Engineers and Frac Specialists are stationed in our district offices to provide quick access to technical support and Field Operators are on-site for every step of the install and frac.



Manufacturing

Packers Plus products are manufactured, assembled and quality inspected in Canada and the U.S. for shipment worldwide. Our main manufacturing center in Edmonton, Alberta is ISO 9001 certified and we use sophisticated manufacturing and resource planning software to ensure detailed product tracking. Our quality control continues after the product leaves the warehouse, as on-site Field Operators go through a detailed checklist prior to installation.

Our team members have years of experience and we are the best in field. We deliver proven performance each and every time.



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Some or all of the systems, methods or products discussed herein may be covered by one or more patents, or patents pending, including US patent numbers 6,907,936; 7,134,505; 7,108,067; 7,543,634; 7,431,091; 7,021,384; 7,353,878; 7,748,460; 7,762,333. Copyright © 2010 Packers Plus Energy Services Inc. All rights reserved. BRO DOM 28-SEP-10 e-version

StackFRAC System Highlights

Customized Solutions • Open and Cased Hole • Horizontal and Vertical Wells • HPHT and Sour Service

Liner Hanger Packer

- Drillable or retrievable
- Continuous or extra-large bore
- Open or cased hole
- Unique anti-preset features
- Specialized slip design
- Self-set or setting tool options
- Available in fullbore inside diameter

Liner Hanger Setting

- Liner rotation available
- Annular release with secondary rotational release
- Torque lock capabilities
- High-angle setting

FracPORT Sleeve

- Ball-actuated, hydraulically-activated
- Field-proven resistance to abrasion and erosion
- All ports incorporate corrosion resistant design
- Provides a flow area greater than the liner
- Sleeve is locked in place upon opening
- Fast drill out times (drill out optional)
- Drillable Closeable FracPORT[™] sleeve can be closed with or without the ball seat in place for: water/gas shut-off, flow control, re-fracturing

Ball Technology

- Over 8 years of research and development
- Up to 15K pressure rating
- High strength material options
- Low specific gravity options
- High density staging
- Easy drillability
- Excellent ball recovery rates

RockSEAL II Packer

- Dual-element/piston design
- Long-term, high-pressure zonal isolation
- High expansion ratios
- Not affected by temperature cycling
- Various application-specific elastomer types
- Anti-preset features

RockSEAL IIS Packer

- Single-element, double-grip anchor packer
- High expansion ratios
- Retrievable bridge plug applications
- Slips provide essential anchoring for toe fracs
- Can be run in conjunction with RockSEAL® II for added sealing

Hydraulic FracPORT Sleeve

- Built-in redundancy and reliability
- Design of sleeves ensure full opening
- Sleeve is locked in place upon opening

Tools and Systems

Packers Plus tools and systems are available in a range of sizes to accommodate:

- Open Hole Sizes: 3 ¾" to 9 ½" (95.25 mm to 250.08 mm)
- Casing Sizes: 4 ½" to 10 ¾" (114.3 mm to 273.05 mm)

System and Application Engineering

- Torque and Drag modeling capabilities
- Low friction/drag coefficients providing for longer laterals and more stages
- Custom centralization to protect packer elements ensuring zonal isolation
- Window exit and re-entry capabilities

Tail Circulating Assembly

The tailpipe section is strategically designed to provide excellent run-in reliability in any well conditions. A Bullet Guide is run at the bottom of the liner, followed by a Float Collar and a Toe Circulation Sub, which features a positive-acting seal valve.

- Eliminate plugging
- High strength guided entry system
- Steerable system for multi-laterals