

**READY TO MAXIMIZE
YOUR RESERVES?**

www.raiseproduction.com

HIGH ANGLE LIFT SOLUTION (HALS) & HORIZONTAL WELLBORE PRODUCTION SYSTEM

Raise Production Inc. has developed a flexible and staged approach to artificial lift for deviated and horizontal wellbores which are intended to work together to achieve ultimate hydrocarbon recovery.

THE CHALLENGE


After initial flush production from a new multi-fractured horizontal wellbore, all wells exhibit the same pattern of significant declines in the first 6-24 months. The frac pressures are greater than the formation pressure and eventually dissipate, at which time it is back to natural reservoir pressure to flow fluids along the horizontal section.

THE SOLUTION

DIVIDE THE WELLBORE into Vertical and Horizontal flow scenarios that can be controlled. Vertical flow is well understood and the various flow regimes are controllable as the well ages and the flowing pressures decrease.

In contrast, horizontal flow from a reservoir is a relatively new concept to the industry. Raise has gained intrinsic empirical knowledge through numerous installations of multiple pumps along the horizontal wellbore. With this knowledge, Raise has developed the solutions necessary to overcome the complex horizontal flow challenges.

Through use of its proprietary technology, Raise provides both Evolutionary and Revolutionary "Life of the Well" Artificial Lift Solutions.



EVOLUTIONARY – Adapt current technology to overcome symptoms of multi-phase flow:

- High Angle Lift (patent pending)
- Thru-Tubing Recovery Flowtube
- Recovery Flowtube with DynaHold™/ DynaPack™ (patented)

REVOLUTIONARY – Multiple pumps deployed and activated in the horizontal section:

- Controlled Flow Optimization
- Horizontal Wellbore Production System (patented)

BEYOND THE BUILD

CONTROLLED FLOW OPTIMIZATION

- Flow management to facilitate fluid separation
- Sand control prior to pump intake
- Address frictional concerns
- Wireline or tubing set
- Run on end of tubing or as a velocity tube

THRU-TUBING RECOVERY FLOWTUBE

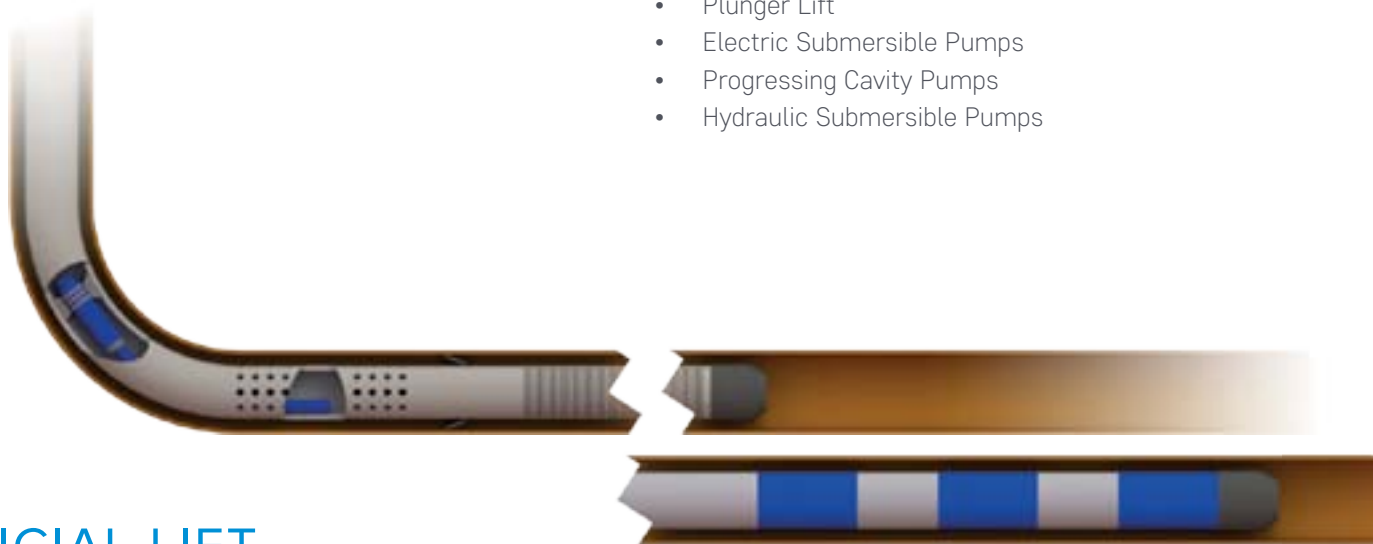
- Increases drawdown
- Facilitates gas separation
- Unlimited by well geometry or deviations
- Engineered for specific well conditions

RECOVERY FLOWTUBE WITH DYNAHOLD™ / DYNAPACK™

- Wireline deployed for thru-tubing & conventional placement in the wellbore
- Flowtube located separate from pump & tubing
- Reaches previously inaccessible reserves
- Installation services & equipment available by request

BEYOND THE BUILD IS ADAPTABLE FOR USE WITH

- Plunger Lift
- Electric Submersible Pumps
- Progressing Cavity Pumps
- Hydraulic Submersible Pumps



ARTIFICIAL LIFT

HIGH ANGLE LIFT

- High compression strokes eliminate gas-locking
- Increased efficiency with reduced rod and tubing wear
- Normally closed and guided valves
- Internal solids elimination
- Articulated features allow >15° deflection
- Can land below tangent or in wells with no tangent
- Better lift efficiency and slower stroke speed

HORIZONTAL WELLBORE PRODUCTION SYSTEM

- Can be run & retrieved in close tolerance wellbores
- Multiple pumps with reliable activation
- Maximizes reservoir drawdown
- Access trapped or stranded reserves



ENGINEERING SUPPORT

- Production evaluation and well candidate selection
- Providing complete reservoir evaluation
- Rod and equipment loading analysis
- Pump and Flowtube sizing and optimization
- Material selection
- Commissioning and ongoing support for field devices on site
- Mutually beneficial economic solution

RAISE PRODUCTION IS THE COMPLETE SOLUTION

- “Chase” the fluid level to gain incremental production
- Manage large volumes of entrained gas
- Eliminate solids & refine flow
- Maximize well drawdown
- Access stranded reserves and draw fluid from the toe

“Without change there is no innovation, creativity, or incentive for improvement. Those who initiate change will have a better opportunity to manage the change that is inevitable.”

- **William Pollard**

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