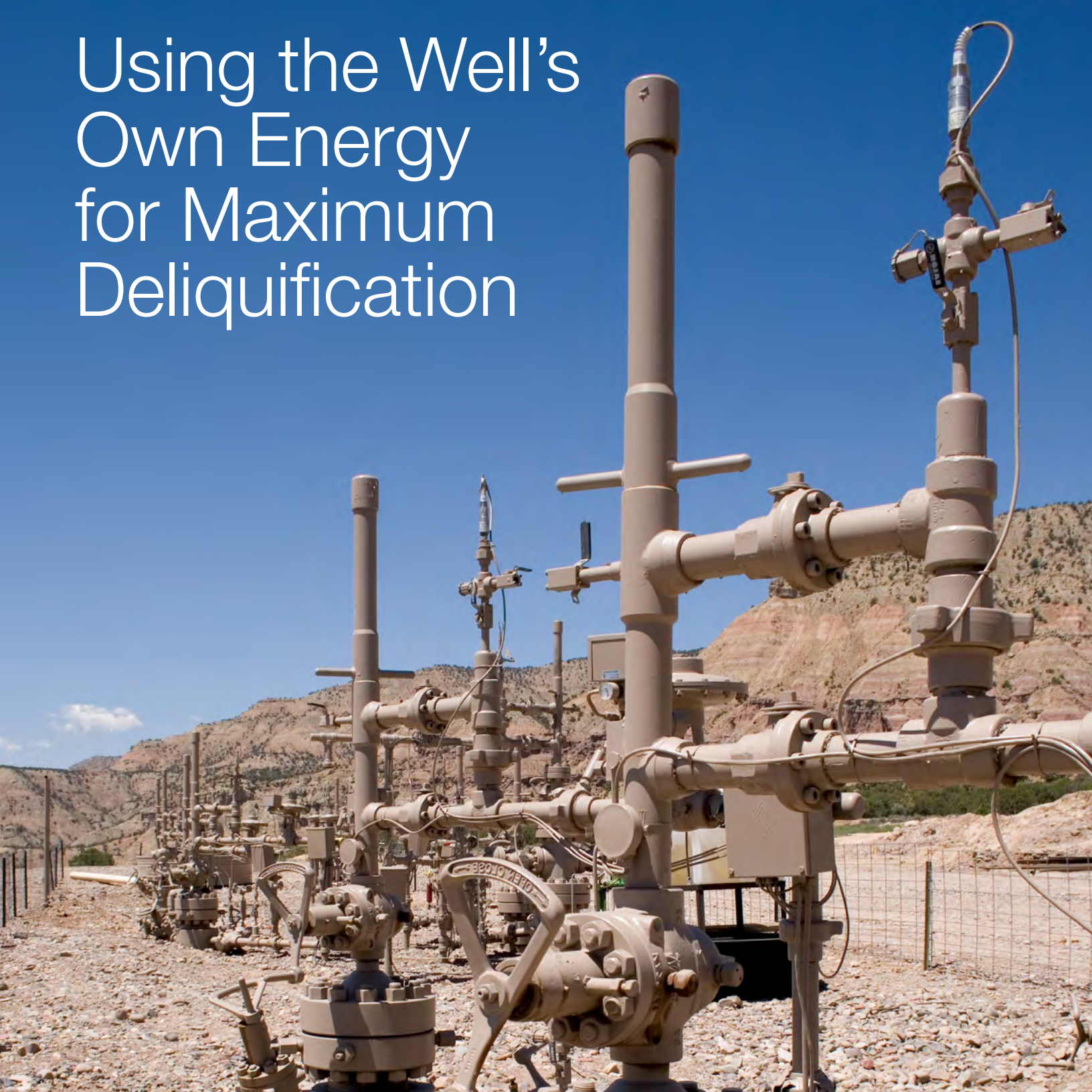




PLUNGER LIFT

Using the Well's Own Energy for Maximum Deliquification



Elevating the potential of artificial lift production.

Dover Artificial Lift, part of Dover Energy, offers a comprehensive line of artificial lift equipment, accessories, and services strategically designed to drive the operational excellence of each of our clients. We provide industry-leading systems and components engineered to enhance the profitability of gas lift, plunger lift, rod lift, progressing cavity pump applications, and surface production, as well as state-of-the-art software and products in the well automation, analysis, and optimization space.

As an organization dedicated to the needs of our clients, we place a consultative service and support approach at the forefront of our operations. Driven by a team of veteran artificial lift experts, our mission is to deeply understand the complex production challenges faced by well operators on a daily basis, and provide them the exact set of tools needed to meet them as efficiently and effectively as possible.

Strengthened by the vast global footprint and tradition of excellence of our parent company, the Dover Corporation, we are able to ensure that the products we provide – and more importantly – the people who make up our organization, are the best in the artificial lift industry.



Utilizing a well's energy to cost-effectively remove liquids.

Plunger lift is one of the most economical ways to achieve maximum deliquification, particularly in marginal and aging wells.

During their natural lives, most gas wells experience some type of liquid loading, when water and oil accumulate in the tubing and well bore. As the volume of those fluids increases and the well loses energy, artificial lift is needed to remove the liquids and maintain production of the well.

Supported by the best plunger lift experts in the world, PCS Ferguson™ Plunger Lift systems are quick and easy to set up. Requiring low capital investment and minimal operating expense, plunger lift provides an excellent return on investment, producing production gains that can offset the cost of the system in as little as a few weeks and almost always within a few months.

Our plunger lift products are thoroughly tested, manufactured to the highest standards, and backed by our decades of experience in the field.



INCREASED PRODUCTION

Plunger lift increases production and extends the economic life of the well.



MINIMAL COST

PCS Ferguson Plunger Lift systems are quick and easy to implement. With low capital investment and operating costs, it is an ideal solution for removing accumulated liquids.



QUALITY AND EXPERTISE

PCS Ferguson provides unrivaled expertise, service, training, and line out assistance. We offer the largest selection of custom-engineered equipment addressing the full range of well conditions and employ only the highest quality manufacturing processes and materials.

The Plunger Lift System

PCS Ferguson designs and manufactures the most comprehensive line of plunger lift equipment in the industry, including a full array of plungers and lubricators to meet even the most challenging conditions.

LUBRICATOR

Provides safe access to the wellbore for installation, inspection, and replacement of the plunger and bottom hole equipment. Also cushions the impact of an arriving plunger at the surface.

CATCHER

Catches and holds the plunger in the lubricator for safe removal.

CONTROLLER

Opens and closes the motor valve using time, pressure, and flow rate, plus provides production history for the operator.

MOTOR VALVE

Starts and stops the well's production based on input from the controller.

SOLAR PANEL

Provides a power source to the controller batteries.

DRIP POT

Prevents downtime by trapping and preventing condensate, water, and other contaminants from clogging the latch valves.

ARRIVAL SENSOR

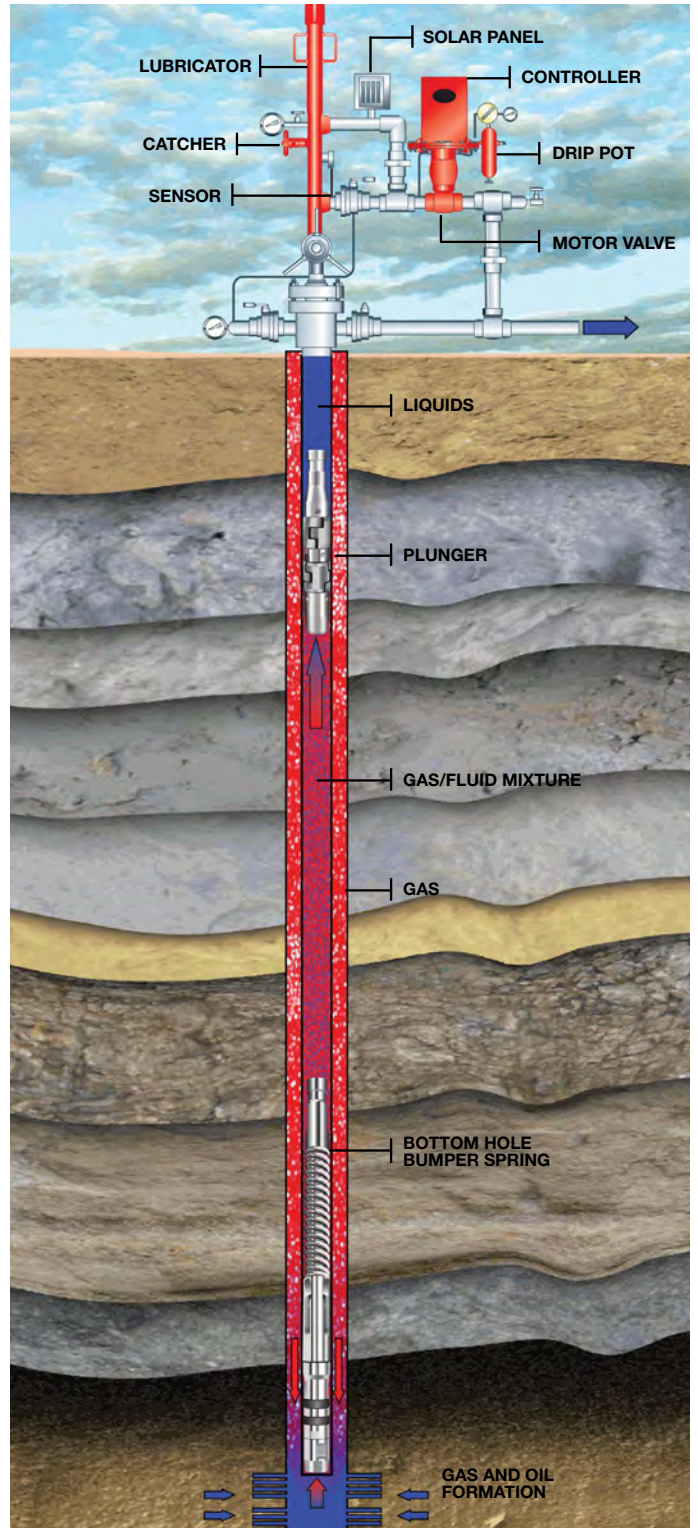
Signals the plunger's arrival to the controller.

PLUNGER

Functions like a swab, creating a seal to the tubing and lifting liquids and solids (sand, salt, coal fines, paraffin, and scale) to the surface.

BOTTOM HOLE BUMPER SPRING

Sits above the seating nipple, protecting the plunger upon impact. Can also hold a ball and seat to trap liquids in the tubing.



Proven Control Algorithms

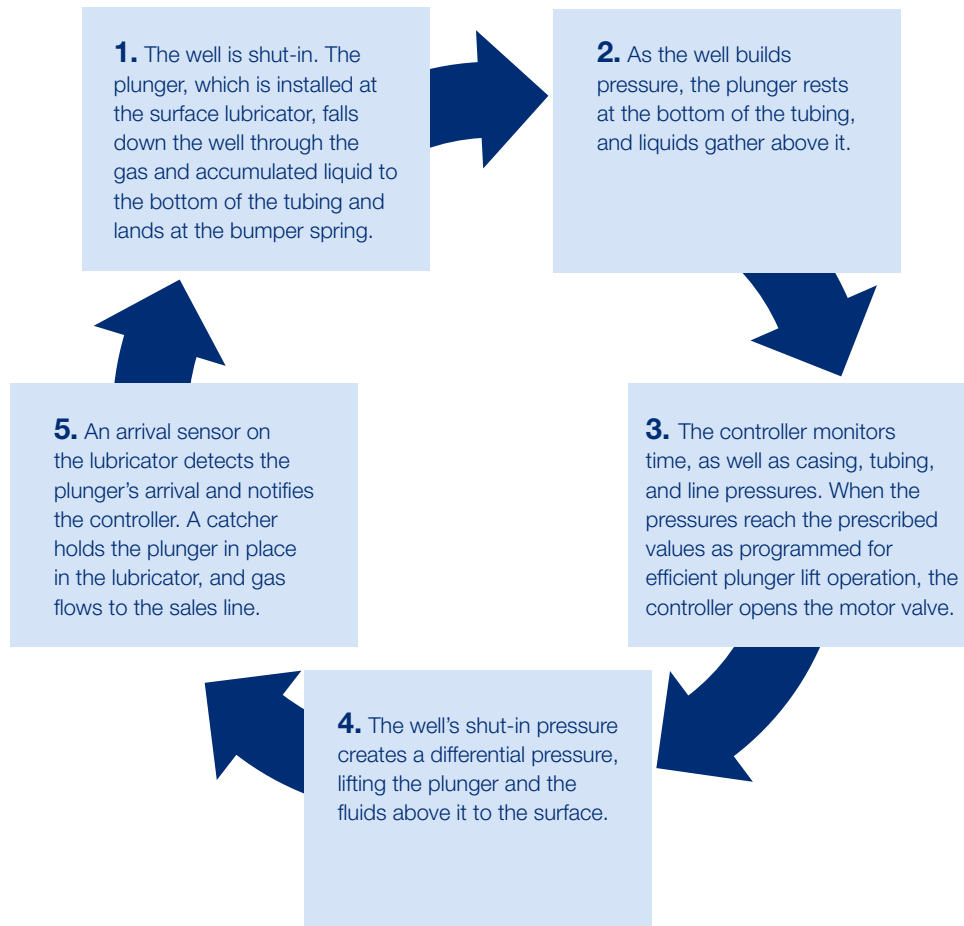
Maintaining efficient cycles for ongoing optimization of a plunger lift well can be a challenge. To reduce the need for intervention, cycles are often set conservatively to keep a plunger running, but this can result in inefficiency and lost production opportunity.

PCS Ferguson offers proven control algorithms, including our proprietary AutoCycle™ technology, to optimize plunger lift operations. Our algorithms continually assess and automatically adjust sales and shut-in cycles based on the changing well conditions. Fluctuations in sales line pressure and well decline are monitored, and cycles are automatically corrected to maintain the highest level of efficiency.



How Plunger Lift Works

The plunger lift system is dependent on the natural buildup of pressure in a gas well. Employing the plunger as a swab, a plunger lift system uses this pressure as energy to lift the plunger itself and any fluids. This is how a typical plunger lift cycle occurs:



When Plunger Lift is the Right Choice

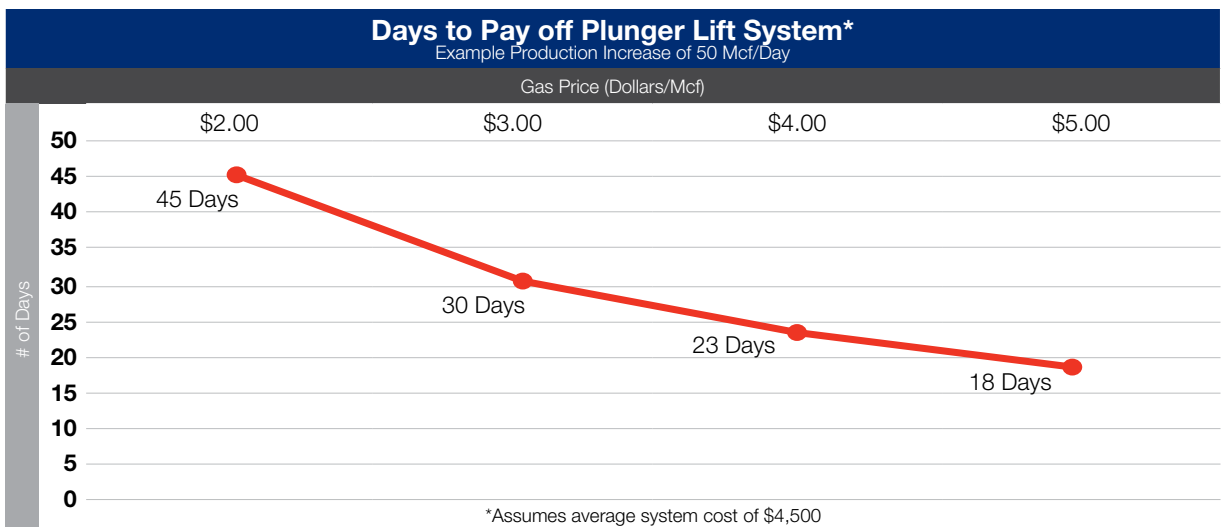
Plunger lift is most effective and economical in wells with specific characteristics, namely low bottom hole pressures, higher gas-to-liquid ratios, and liquid production of roughly 130 barrels per day or less. It typically performs best when gas velocity is at, or near, critical rate.



- Removes accumulated liquids
- Minimizes shut-ins and blowing to the atmosphere
- Provides an alternative to soaping
- Controls paraffin and hydrate buildup
- Extends the economic life of the well
- Lowers operating and maintenance costs

Exceptional Return on Investment

The investment in a PCS Ferguson Plunger Lift system typically runs between \$2,500 and \$10,000. A plunger lift system could increase production by 100 Mcf/day or more. Even with a conservative increase of 50 MCF/day, an average plunger lift system typically pays for itself in as little as a few weeks.



Partner with the best team in the business.

PCS Ferguson is part of the Dover Artificial Lift group of companies which offers a comprehensive line of artificial lift equipment, accessories, and services strategically designed to drive the operational excellence of each of our customers.

- Decades of experience recommending and servicing lift systems to accommodate changing well conditions
- Unrivalled expertise in plunger lift, gas lift, well control, and well unloading
- The best performing, highest quality, and safest products designed, engineered, and manufactured in-house at our Colorado and Texas facilities
- Experienced and responsive field support staff with extensive local knowledge
- The highest commitment to the protection and safety of our employees, our customers, and the environment

PCS Ferguson products and services are available in the following North American locations:

Administrative & Manufacturing

Frederick, CO 720.407.3550

Canada

Calgary, AB 403.266.6139
 Claresholm, AB. 403.625.4105
 Consort, AB 403.577.2519
 Drayton Valley, AB 780.514.5206
 Edson, AB. 780.723.2759
 Grand Prairie, AB. 780.539.7773
 Red Deer, AB. 403.340.3605

Arkansas

Conway 501.932.0449

Colorado

Denver. 720.407.3550
 Evans 970.539.9003
 Fort Lupton 303.857.1522
 Grand Junction. 970.241.7177
 Parachute 970.285.9652

Louisiana

Shreveport. 318.221.5934
 Haynesville 318.464.8134
 Lafayette 337.886.0009

New Mexico

Farmington 505.326.4239

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Minot. 701.566.3278

Oklahoma

Oklahoma City. 405.440.1015
 Stigler 918.967.3236
 Woodward. 580.256.1317

Pennsylvania

Coraopolis. 412.264.6000
 Duboistown 570.327.1750

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 Freer. 361.394.5880
 Houston 281.350.2084
 Kenedy/Karnes City 830.583.9900
 Midland-Odessa. 432.563.1012
 Perryton 405.213.8114
 San Angelo. 325.699.4758
 Sonora 325.387.6260
 Tyler 903.561.4851
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