

Mission Statement

Cormorant Engineering is dedicated to bringing new pumping solutions to the oil and gas industry for applications not well served by current technologies.

The new solutions are targeted to complement, and in many cases follow, the existing pumping methods used during a well's life cycle.

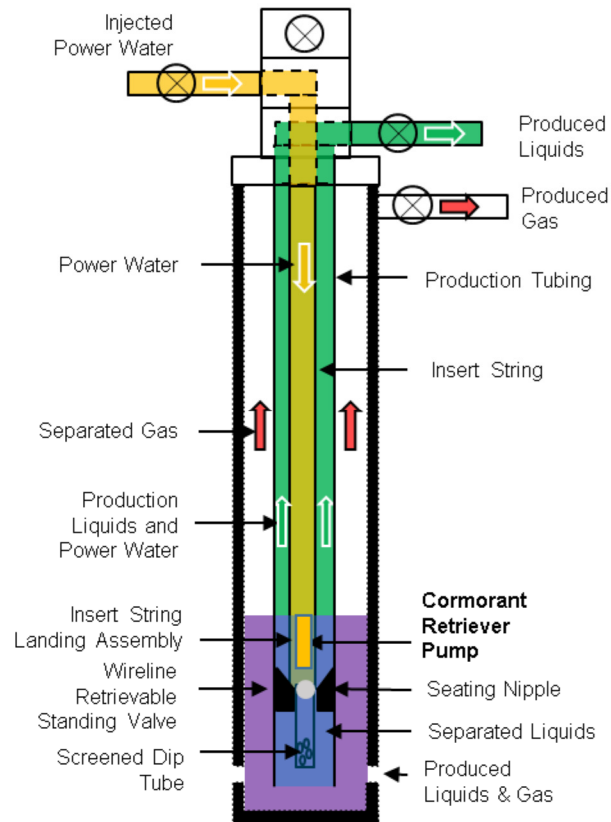
Cormorant strives to provide the most user-friendly, cost-effective systems to wells with otherwise marginal economic performance.

Cormorant Engineering

929 State Highway 150
New Waverly
Texas
77358

Phone: 936-337-4427
E-mail: info@cormorant.us.com

Typical System Configuration



Making unpumpable wells pumpable

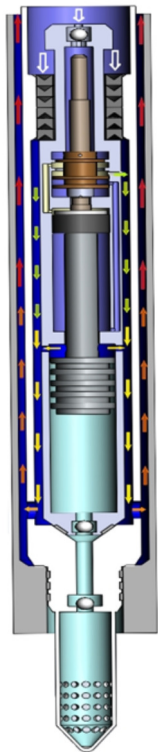
Retriever™ Rodless Rod-Pump System



Retriever™ Rodless Rod-Pump System

Description

Cormorant Engineering's new Retriever pump system pairs a new drive system with a traditional rod-pump type pump. The reciprocating rods are replaced with a single, static standard insert string.



A unique, patent-pending, down-hole shuttle valve enables a continuously circulating power fluid to drive the down-hole reciprocating pump.

The pump is installed, and if necessary retrieved and reinstalled, by simply circulating the pump up or down the insert string, so not requiring a service rig.

A simple, low-power hydraulic surface pump is

used to pump pressurized drive fluid through the insert string, and so drive the down-hole pump.

Benefits and Applications

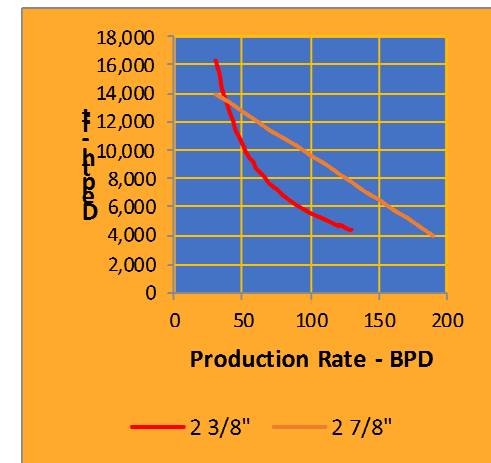
The reciprocating down-hole pump has all the advantages of a regular rod-pump. The unique configuration of the Retriever drive system affords several additional advantages. Combining these systems provides a unique set of benefits...

- Can pump water, oil and condensate.
- Resistant to gas-locking.
- Is intrinsically suited to high-solids environments.
- Suited to deviated and crooked well profiles.
- Suited to low intake-pressure applications.
- Requires very little surface power, typically running at less than 10hp.
- Easy to install, replace and monitor.
- Rigless pump installation and retrieval process.

The Retriever Rodless Rod-Pump is ideally suited to low-volume, oil or gas well applications where well conditions no longer support plunger lift or jet-pumps, and where rod pumps are not viable.

Depth and Flow Rate

The high efficiency of the system translates to exceptional depth and flow rate capabilities, from such a small unit.



Typical maximum production rate versus depth for 2 3/8" and 2 7/8" completions