# **Economic Analysis**

Numerous studies have indicated that the "Farr" plunger lasts from 2.46 to 5.98 times longer than a standard conventional API plunger. For this economic analysis, let's be conservative and only use a factor of 4 times

### Assumptions and facts for study.

Ave. Production / Well = 20 BOPD

Crude Oil Price = \$85.00 / barrel

Well Pulling Costs = \$5,000 / well

Pump Repairs = \$2,000 / repair

Farr Cost over Conv. = -\$400 / repair

Ave. Down Time = 4 days / well

Ave. Increase in Run Life = 4 times

### **Savings Due to Farr Plunger**

Well Pulling Cost:  $(\$5,000 \times 3)$  = \$15,000Down Time:  $(4 \text{ days } \times 20 \text{ bopd } \times \$85 \times 3)$  = \$20,400Typical Pump Repair Cost:  $(\$2,000 \times 3)$  = \$6,000Cost difference for Farr : (Average) = -\$(400)

## Costs Savings per Well = \$41,000

## Muth Pump LLC.

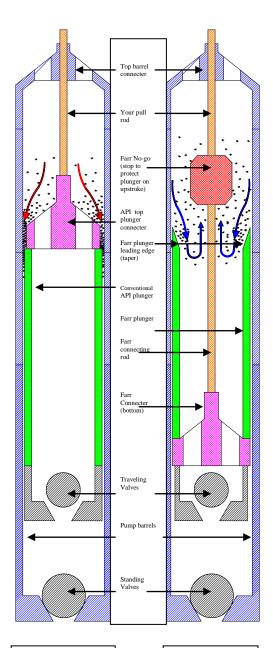
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#### United States Patent # 6,543,543

<u>Canadian</u> Patent # 2,201,497 <u>Venezuela</u> Patent # 58.883 <u>Indonesia</u> Patent ID # 0-017-803



Old Conventional API Plunger

New Style "Farr" Plunger

# **Muth Pump LLC**

Creator of the "Farr" plunger



By "Farr," We Make Your Rod Pumps The Best In The Industry!

### Benefits of the FARR Plunger

- Cut Well Pulling Costs by 50% Guaranteed
- Reduce Environmental Spill Incidents
- Save Energy with less frictional drag
- Reduce Health & Safety Incidents
- Reduce ware on Rods and Tubing
- Increase Production
- Increase Profits

Visit our website for detailed information on studies of the FARR Plunger!

# By "FARR" We Make Your Rod Pumps The Best In The Industry!

## **FARR Plunger Advantages**

#### The FARR Plunger

The FARR Plunger is a rod pump plunger that has revolutionized the oil industry and how production companies deal with sand and other solids. The FARR Plungers unique patented design allows it to pump when sand and other solids are present in the production fluid, without sticking. It can be used in any API pump barrel for insert and tubing pumps.

#### **Increase Pump Life 3-6 Times Longer**

Studies in California, Indonesia, and Venezuela have all shown the FARR Plunger out-performs other rod pump plungers. Increasing run life an average of 3-6 times. In some cases our customers have seen run times increased 50-100 times.

# Increased Production, Efficiency & Profits

Because of the FARR Plungers patented design it has a tighter fit than other plungers in sandy conditions; therefore it has higher pump efficiency. Also the FARR Plunger will stay in the well longer, which means less down time which will increase production.

With the increase in production and reduction in well pulling costs and pump repairs you will see higher profits from using the FARR Plunger.



#### Cut Well Pulling by 50%

Studies have shown the FARR Plunger will cut your well pulling by 50% or more. On average the FARR Plunger will pump 3-6 times longer than conventional plungers.



### **Reduce Environmental Spill Incidents**

There is an increased risk for a spill or an accident every time you have to pull a pump from a well. Sometimes when a pump is stuck you have to pull the whole tubing string to retrieve the pump and get the well operational again. This could result in costly spills or other problems.



### **Reduce Health & Safety Incidents**

Most oilfield accidents occur when you have rigs or other work over equipment on site. You have more personnel in the area and a greater risk for injury. Because the FARR Plunger will stay in the well longer there will be fewer well pulling's which reduces the risk for injury.



### **Stuck Plungers Eliminated**

With conventional plungers when sand enters the production string the sand will get between the plunger and pump barrel wall and stick the pump; Stopping production. The FARR Plunger has eliminated this problem. Its unique patented design allows the FARR Plunger to pump sand and other solids without getting stuck in the pump barrel. You don't need any special equipment to use the FARR Plunger as it is designed to fit into any API pump barrel and comes in all standard industry sizes.

#### **Saves Energy**

The FARR Plunger prevents the sand from getting between the plunger and pump barrel wall, consequently there is less friction which reduces the amount of energy needed to lift the fluid. Because of the patented open top end of the FARR Plunger you can use Pump Off Controllers without fear of sticking the pump. During a shut down the sand or solids will settle inside the body of the FARR plunger. With conventional plungers the sand will settle and stack on top of the plunger and cause the pump to stick.

