
WELL MASTER
ADVANCED FLOW CONTROL

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Produce more. Spend less.

AFC OVERVIEW

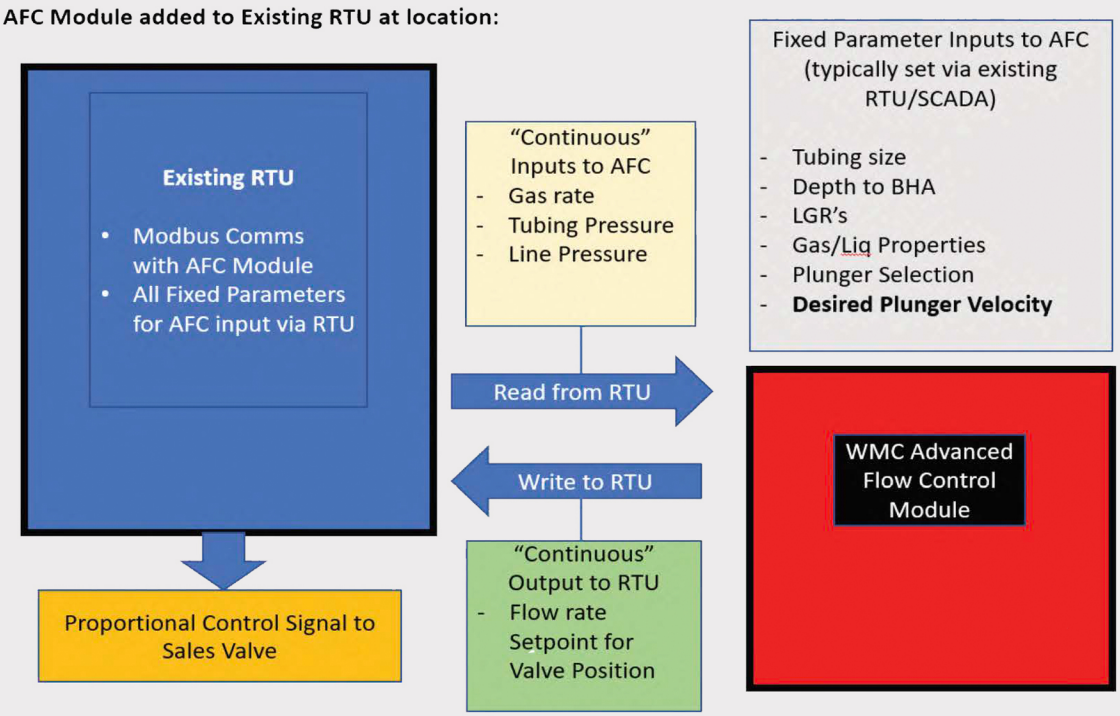
ADVANCE FLOW CONTROL FOR PLUNGER LIFT OPTIMIZATION

WHAT IS THE PROBLEM BEING ADDRESSED?

The traditional approach to understanding desired plunger velocity is based on operating within the "ideal" target range. However, the problem is, the control systems only measure the average velocity from the start of the rise cycle to the end. Plunger velocity can actually vary enormously from bottom to top of the well.

WHEN SHOULD AFC BE USED?

- Where good plunger velocity management is key for best plunger operating efficiency and production
- Where broken plungers and/or damage to surface equipment is prevalent
- Low line pressure or high variable line pressure environments



WHAT IS AFC COMPATIBLE WITH?

- RTU Controllers w/MODBUS
- Conventional and cloud-based SCADA

PATENT INFORMATION

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BENEFITS OF AFC

FEATURES AND BENEFITS

- **SAFETY -** Eliminate fast arrivals
- **EQUIPMENT INTEGRITY -** Fewer broken plungers and damaged surface equipment
- **INCREASE PLUNGER LIFE -** Excess speed wears plungers faster. Controlled speeds extend plunger life
- **INCREASE PLUNGER EFFICIENCY -** Narrow the velocity range over the entire trip to optimize speeds
- **Recovery from pressure upset** conditions as wells line out automatically
- **Reduces operator intervention** for plunger replacement and wellhead issues
- Utilizes **Well Master's proprietary live plunger data** for production optimization
- Helps **maintain** the well on its **natural decline curve**
- Shifts the inspection conversation from traditional "Plunger" to **"Production" focus**
- **Identification of fluid fall back** on plunger cycles
- Enhanced **protection of** the **BHA** from dry hits
- Visual perspective on **build rate characteristics**
- **Accurate** identification of **plunger fall times**
- **Prolongs** the lifespan of **plungers**
- **Detection of leaky bumper springs** or potential tubing issues
- Potentially **defers wireline/sickline intervention** for BHA inspections
- Ability to **provide** and support a **complete field database**
- **Quick setup** on various wellhead configurations
- **Cloud-based hosting** for reading and sharing data **(remote monitoring)**
- **Real-time analysis** of all data points
- **Production gains typically offset project costs during optimization process**

BEFORE AFC

SCADA reports plunger V = 996 fpm average

At open plunger V = 892 fpm

At Arrival V = 1940 fpm

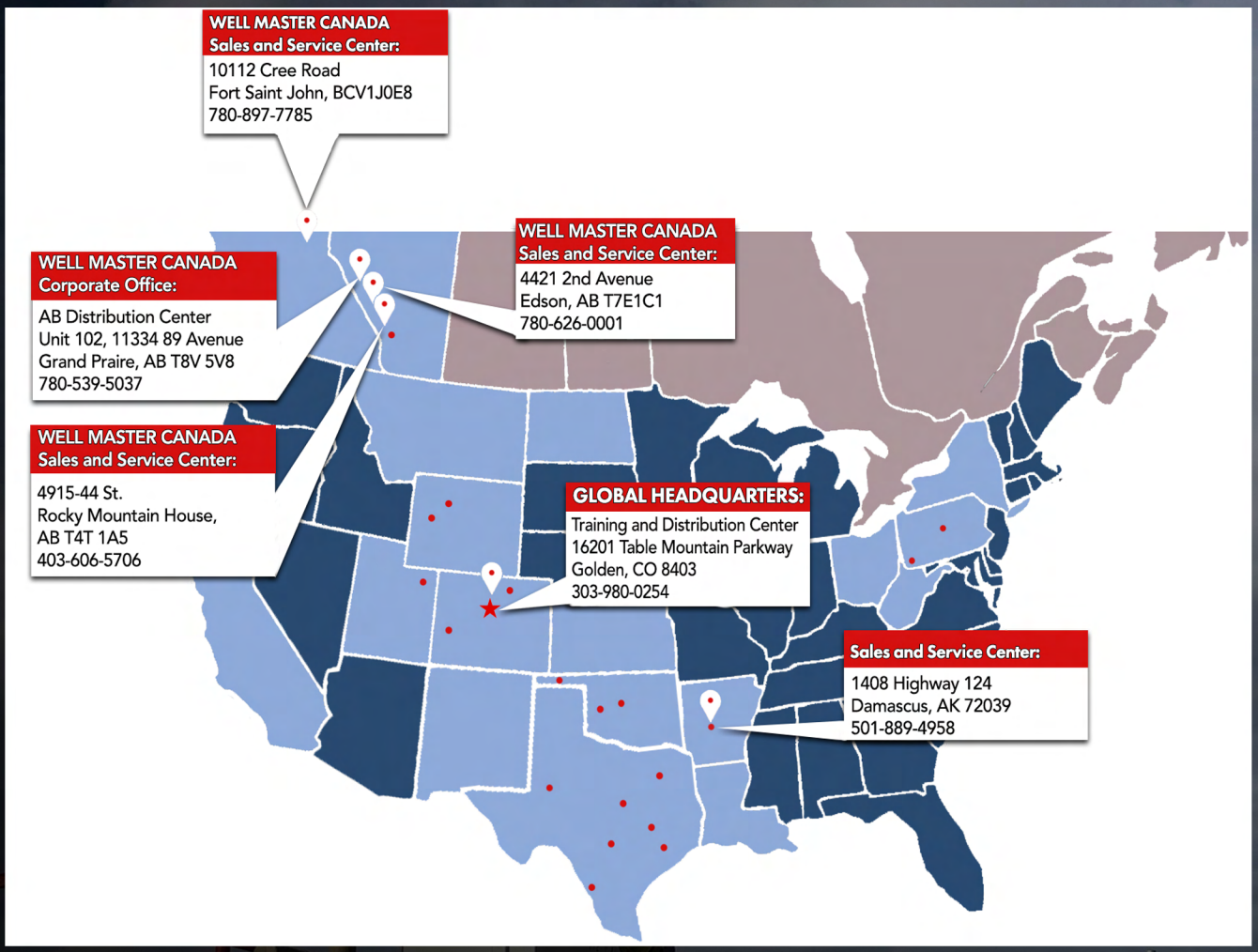
AFTER AFC

SCADA reports plunger V = 898 fpm average

At open plunger V = 969 fpm

At Arrival V = 717 fpm

Contact Well Master today to find out how we can help optimize your oil and gas well production



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