



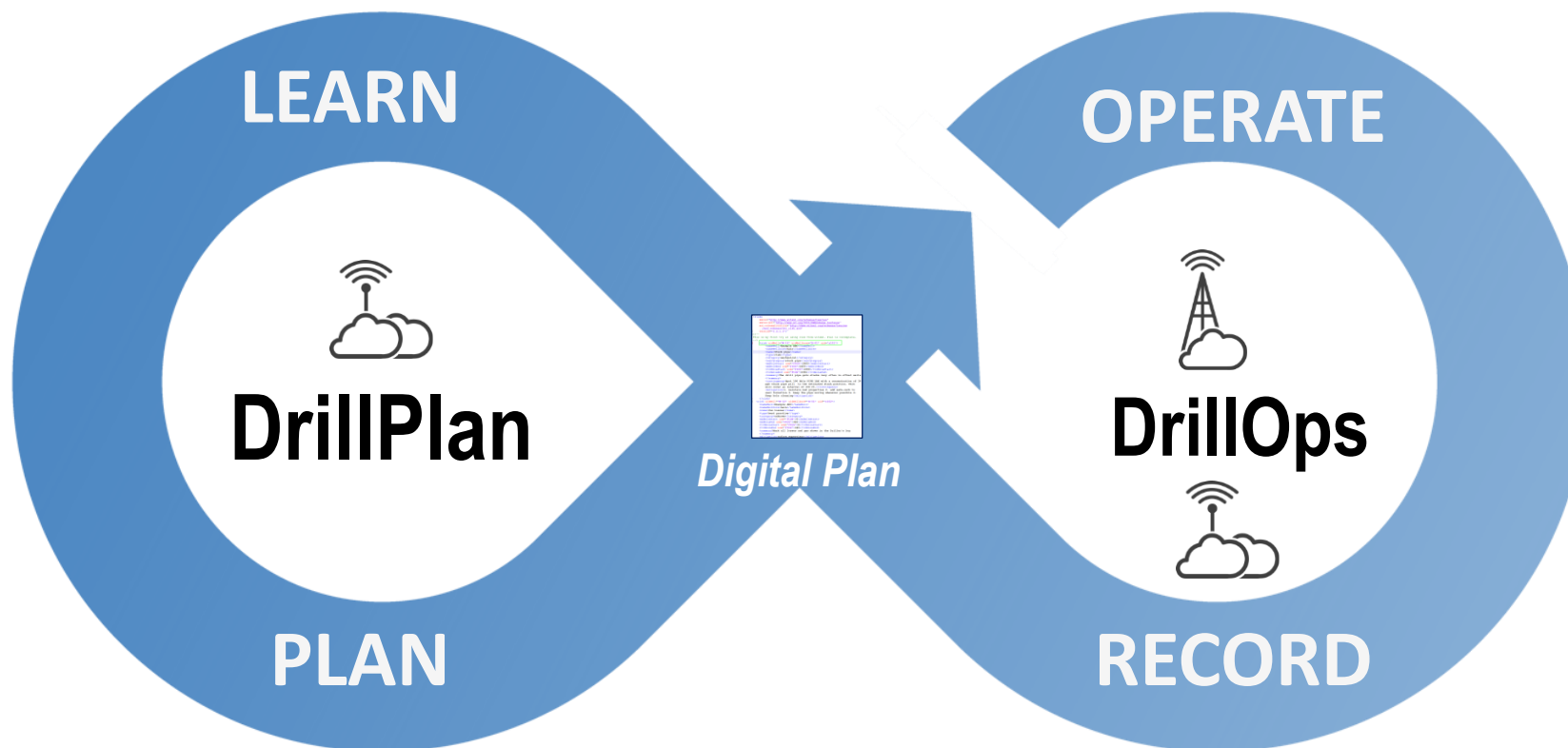
RheoProfiler

M-I SWACO

Product Champion – Katherine Price Hoelscher

Schlumberger

Digital Well Construction Cycle – Automation and Digitalization



Learns from recorded data, **designs** the well and **delivers a digital well plan**

Executes safely the plan in its **operating window** and **records data**

RheoProfiler – Automated Fluid Measurements



Fluid Measurements

- Rheology and density at temperatures between 4-65°C (API 13B)
- Complete test at temperature with gels (10 sec to 30 min) in 60 min
- Accuracy within 5% for R100 to R600 and 1 dial reading for R3 and R6 of Fann 35 and 0.01 SG



Design Features

- Controlled by a touchscreen
- Safe area use only
- Highly mobile - 75 lb with a 2' x 2' X 1' footprint
- Self cleaning



Data Accessibility

- Results are timestamped and sent to SLB InterACT server
- Data is available on laptop or smart phone
- Data can be viewed locally on the touchscreen
- Compatible with Virtual Hydraulics and PressPro RT software

Engineering & Manufacturing



Schlumberger

RheoProfiler – Operational Efficiency



Improved Drilling

Improved hydraulics modelling
Faster response to changes in
drilling fluid
Improved and continuous QA
Reduced risk



Efficient Spending

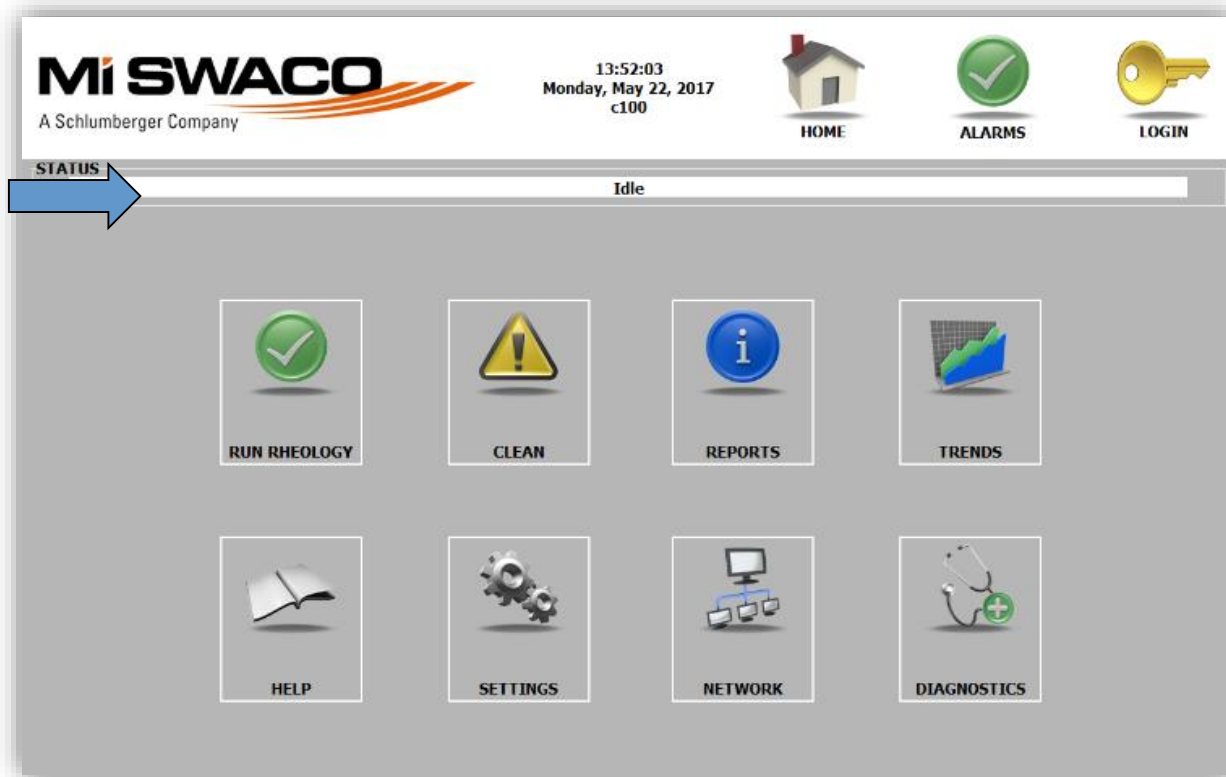
Less labor & lower costs
Better product usage
Reduce NPT



Optimized Resources

Data can be used to assess trends
or anomalies
Mud Engineer can focus more on
operations
Communicate data faster to the
operations team

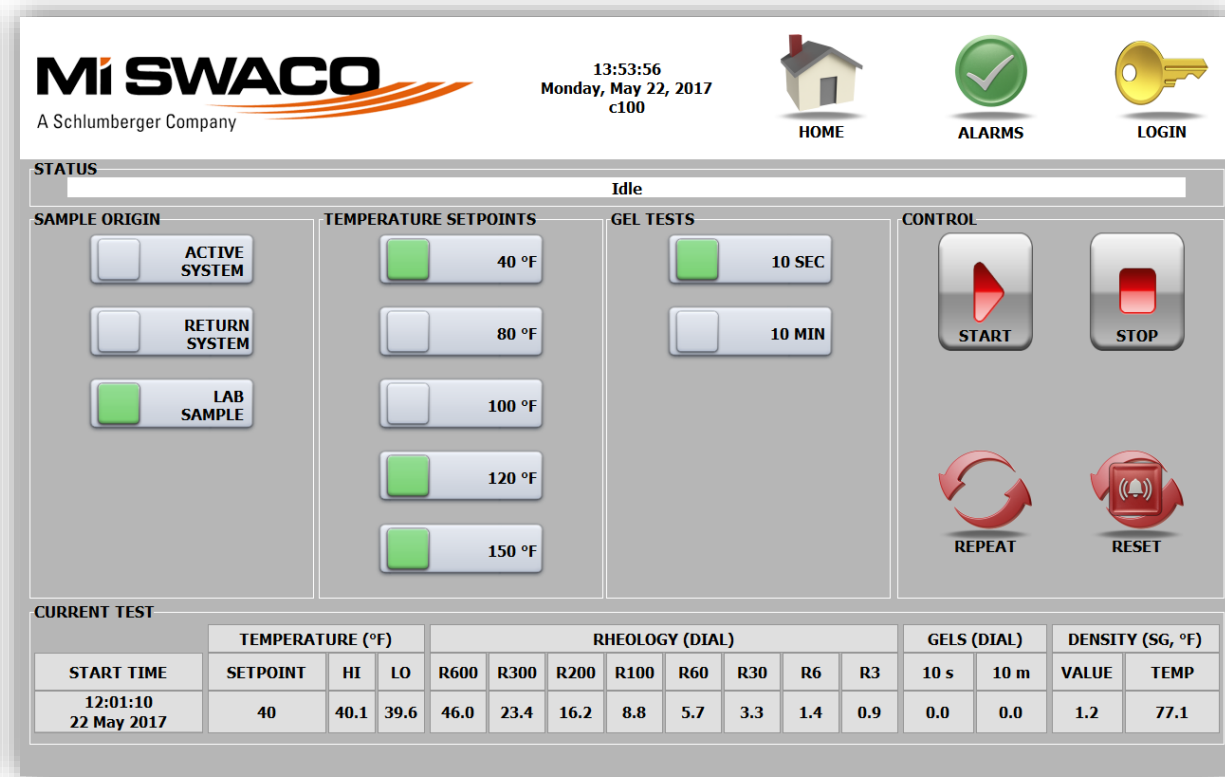
RheoProfiler – Touchscreen Controls



Home screen

- Works with gloves
- Large buttons for easy use
- Clean feature

Engineering & Manufacturing

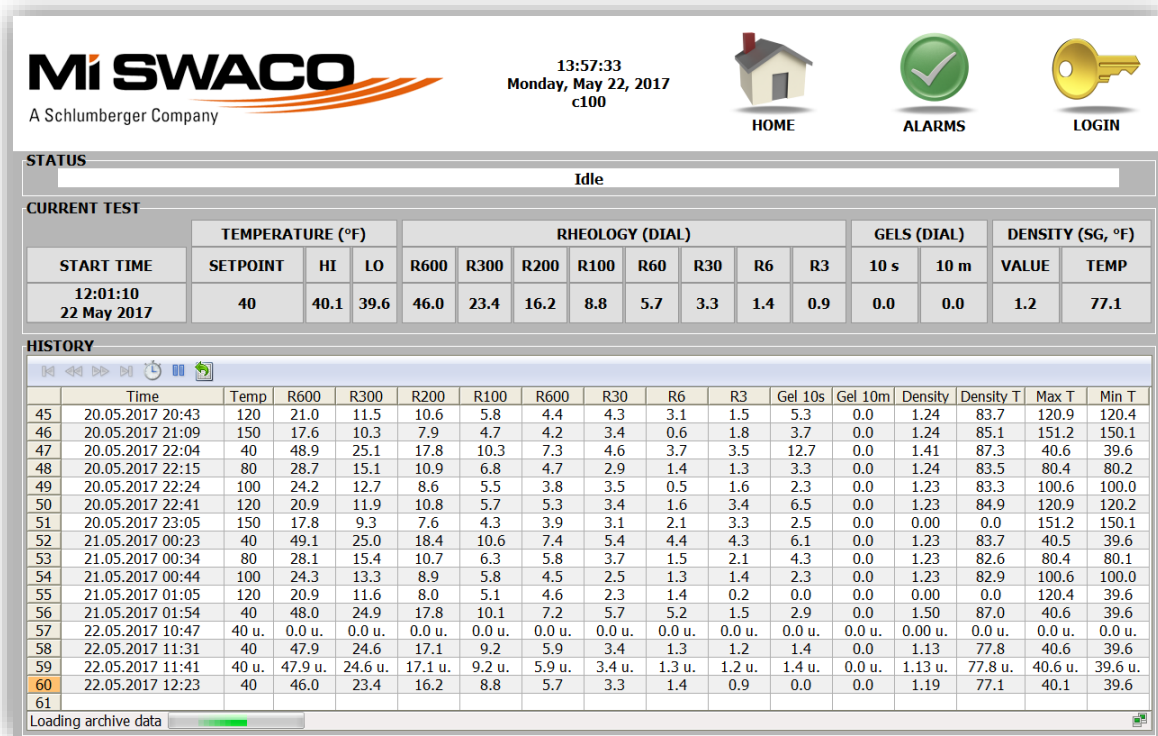


Settings

- Designate sample type
- Select temperatures
- Select gels

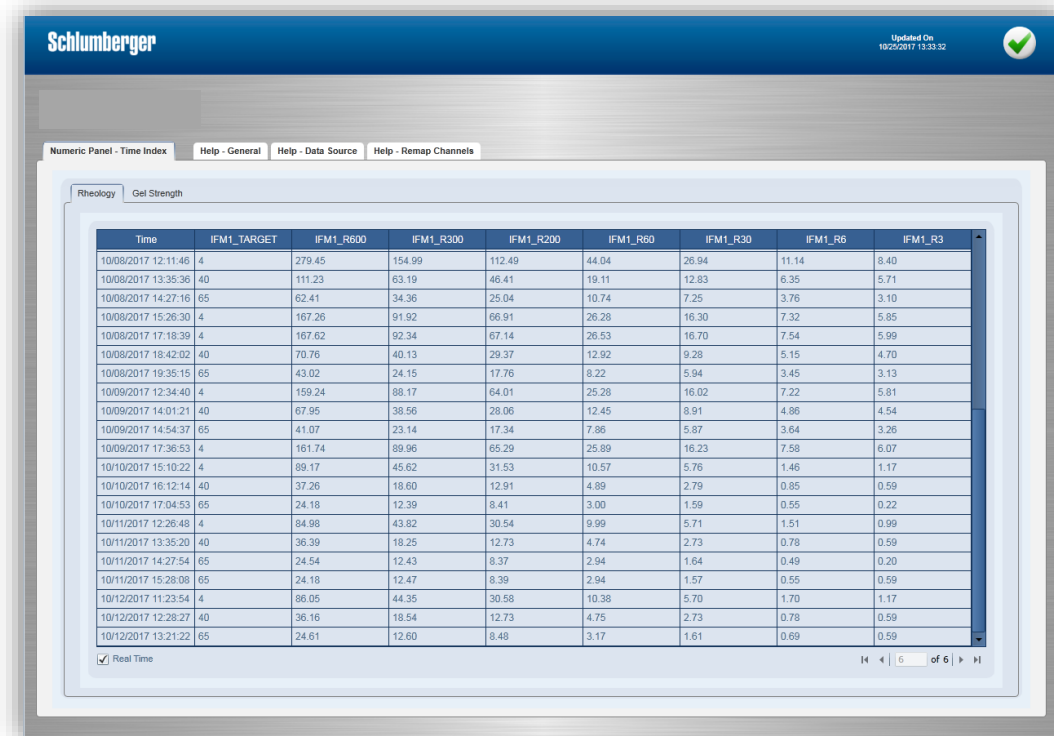
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RheoProfiler – Drilling Fluid Data at Your Fingertips



RheoProfiler

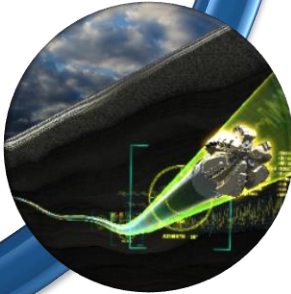
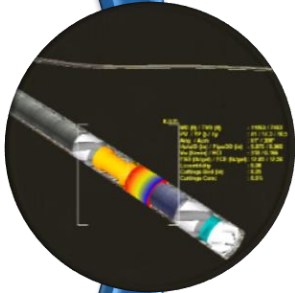
- Historical data can be quickly viewed on the touchscreen of the unit



InterACT

- Measurement data is sent to the SLB server
- Information is accessible anytime on a laptop or smartphone for team members

RheoProfiler - Software



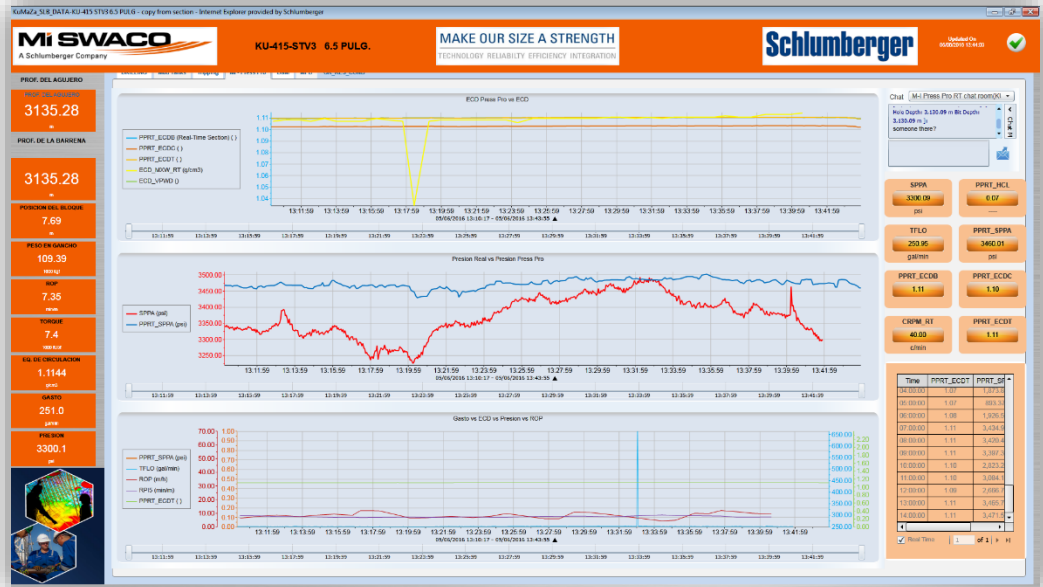
InterACT

Virtual
Hydraulics

PressPro RT



InterACT

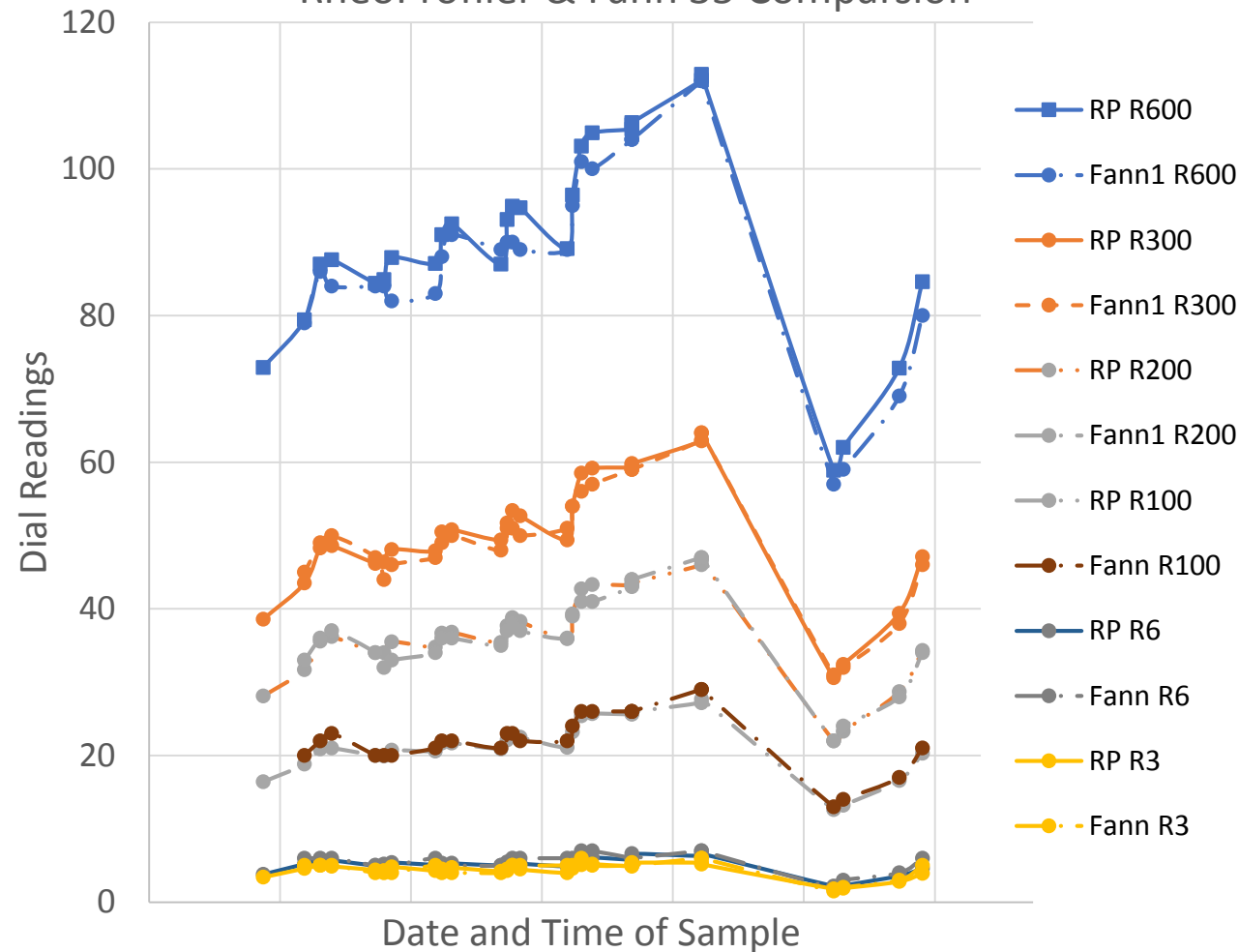


PressPro RT

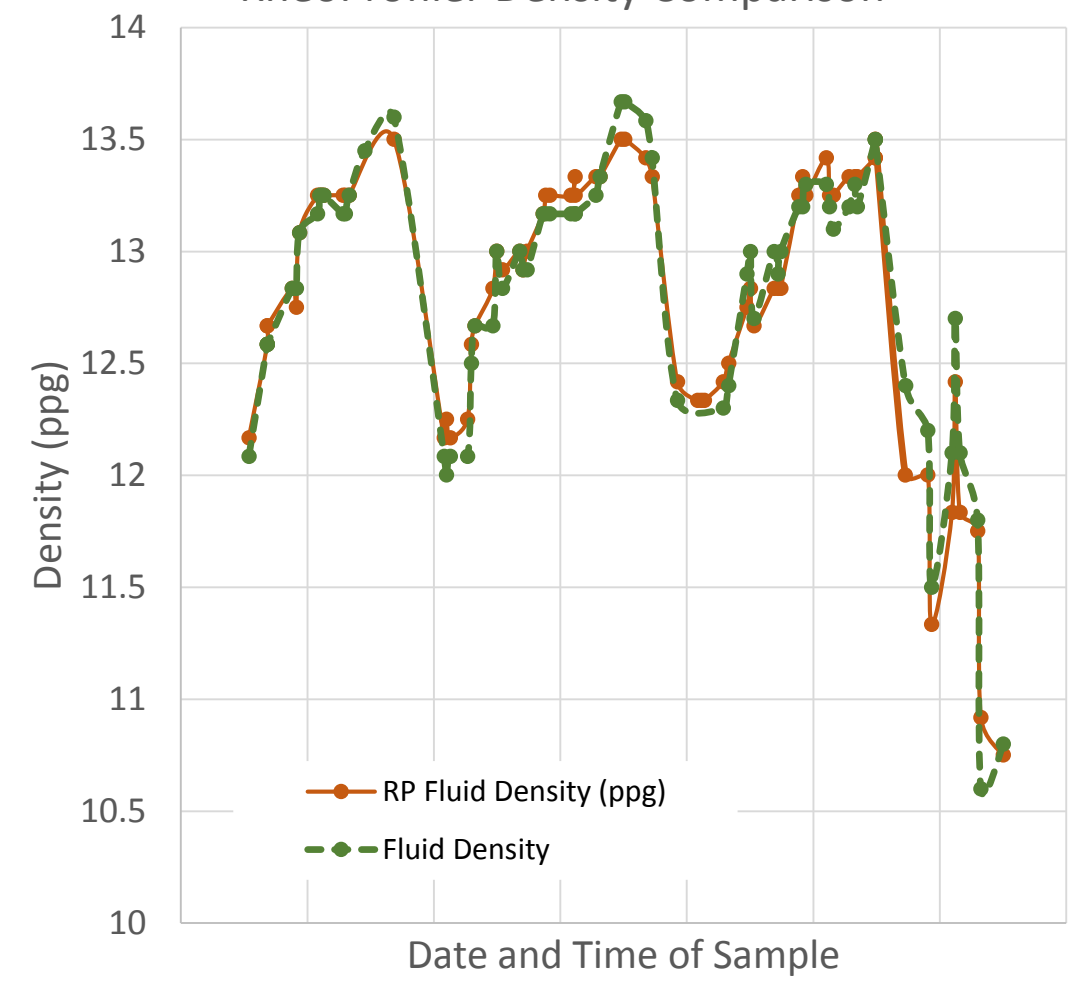
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RheoProfiler - Field Results with OBM

RheoProfiler & Fann 35 Comparison



RheoProfiler Density Comparison



Pros & Cons

There are pros and cons to having drilling fluid measurements collected by hand



Con

Pro

Dependent on a person

Sample must be taken to the equipment

Flexibility in collection point

Installation is very easy

Equipment cost is less

Less maintenance

Summary

- API rheology and density (4-65 °C)
- Data available on touchscreen or on laptop/smart phone via InterACT
- Data uploads to VH and PressPro RT
- Self cleaning and low maintenance
- Very mobile and easy to use

Thank you



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