



# MAXIMIZE PRODUCTION PERFORMANCE ASSET WIDE

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Technical Sales Manager



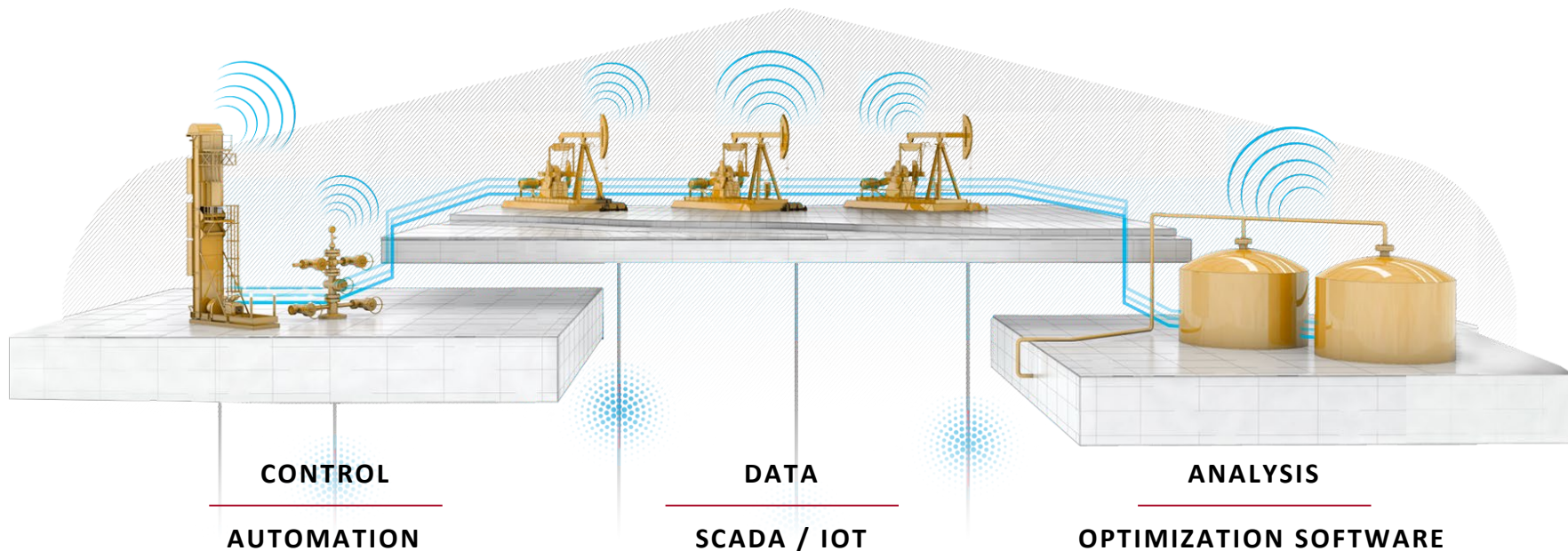


# THE FOUNDATION FOR PRODUCTION PERFORMANCE

**BOOST  
PRODUCTION**

**REDUCE  
DOWNTIME**

**PERSONNEL  
EFFICIENCY**

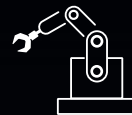




# WHAT DOES INDUSTRY 4.0 MEAN TO PRODUCTION

**INDUSTRY 4.0**

IoT



CLOUD



ANALYTICS





# PRODUCTION OPTIMIZATION







# ForeSite®

PRODUCTION OPTIMIZATION PLATFORM



RESERVOIR



WELL



FACILITIES



ENGINEERING MODELS

OPERATIONS

ARTIFICIAL INTELLIGENCE

CLOUD

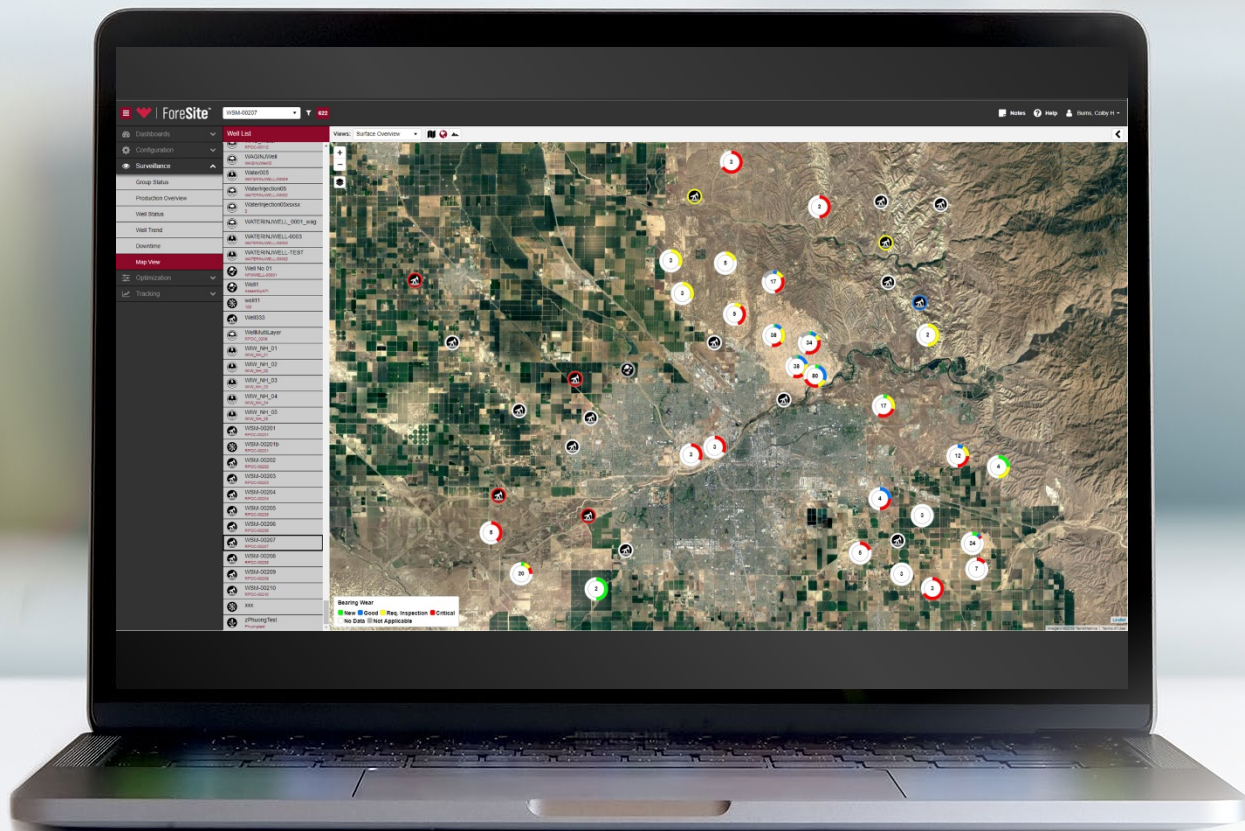


# GAIN INSIGHTS FOR SMART DECISIONS



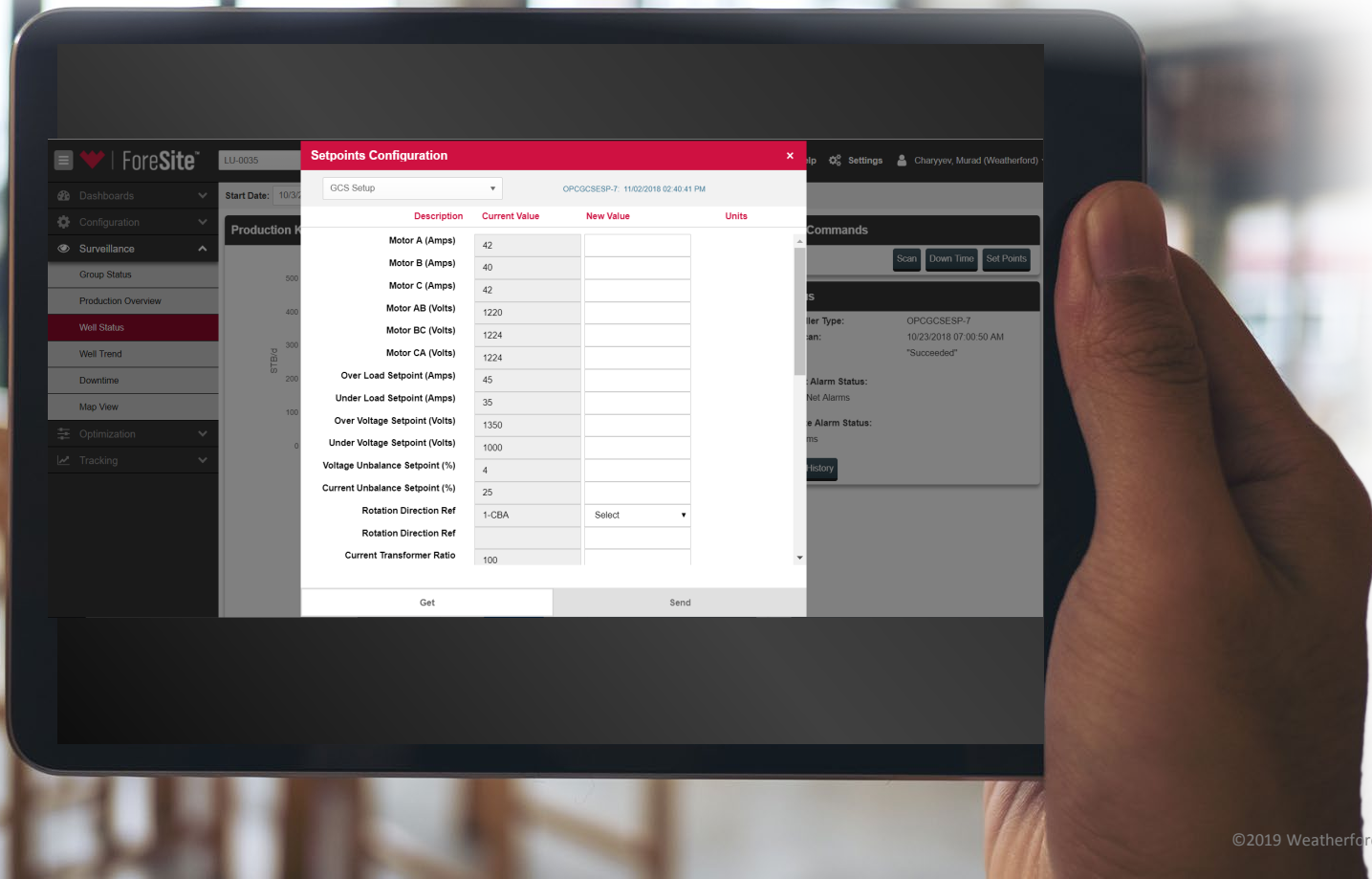


# UNRIVALED CAPABILITY: ASSET OPTIMIZATION





# UNRIVALED CAPABILITY: CONTROL FROM ANYWHERE





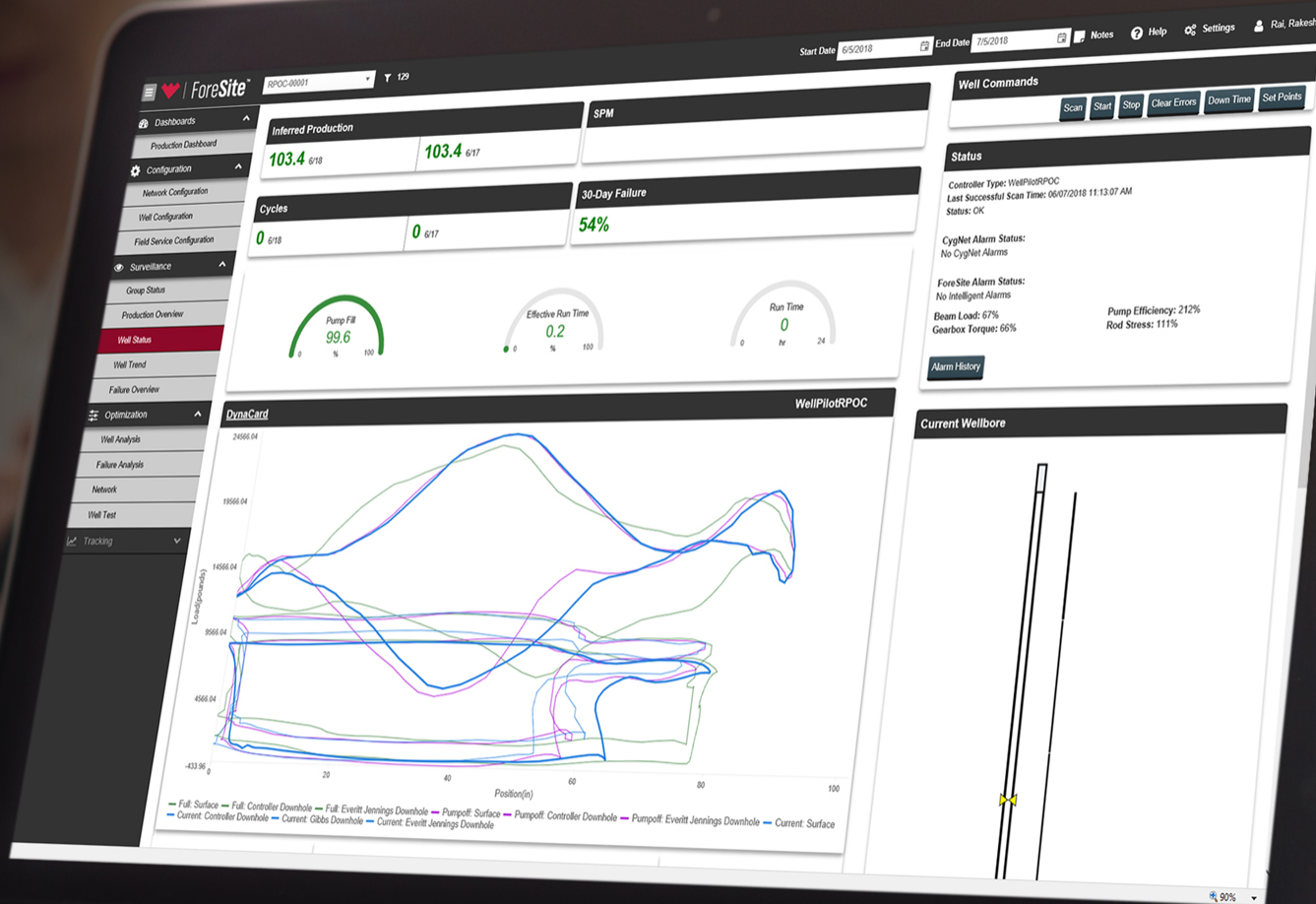


# INTEGRATE PRODUCTION DATA WITH WELL MODELS

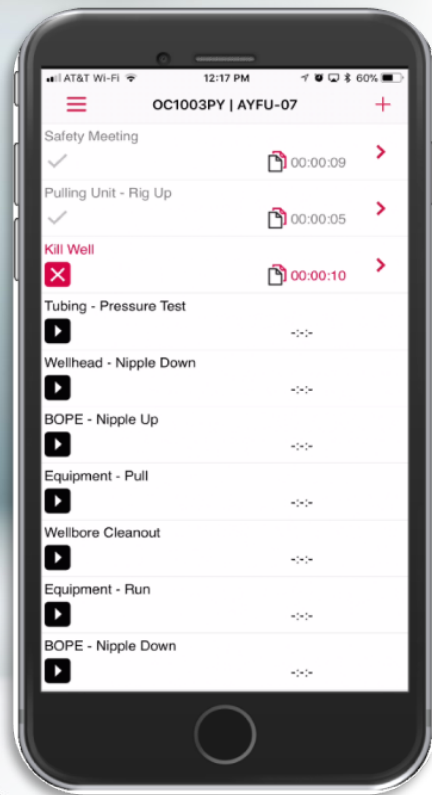
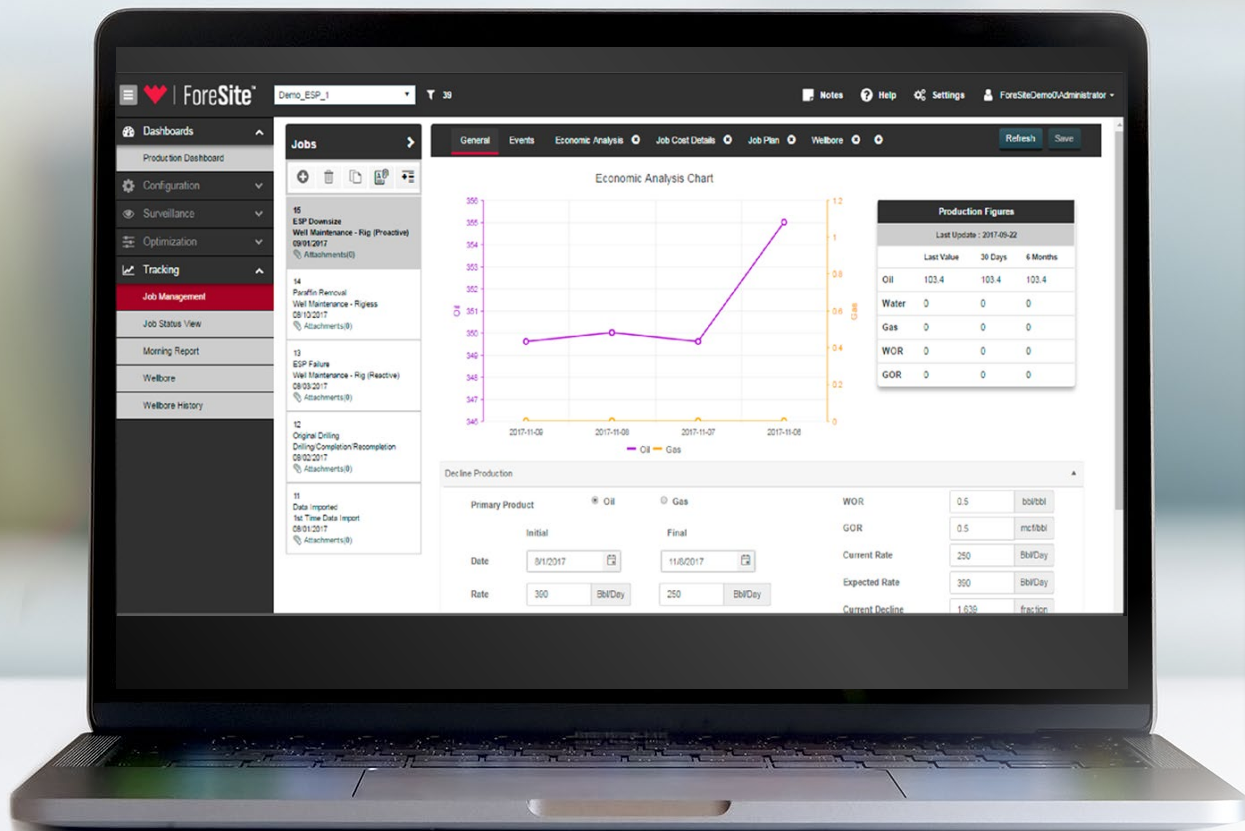




# INTELLIGENT ALERTS AT THE COMPONENT LEVEL



# PRIORITIZE OPERATIONS WITH ECONOMIC ANALYSIS







# UNRIVALED CAPABILITY: ESP & RRL FAILURE PREDICTION

Combining  
Machine Learning  
and physics-  
based algorithms

ForeSite™

Dashboard

Group Status

Failure Overview

Well Status

Failure Analysis

Well Test

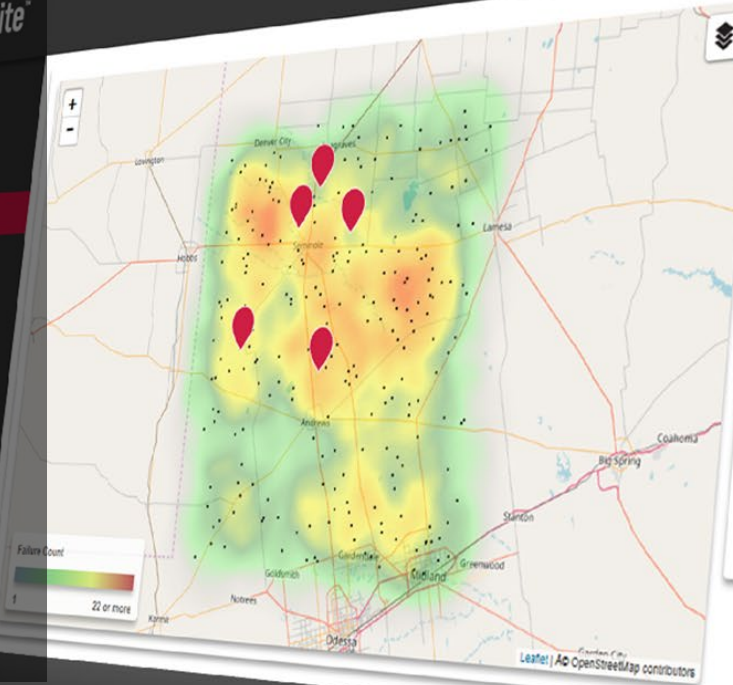
Well Trend

Well Configuration

Well Configuration

Well Configuration

Well Configuration



Well [260]

BEAM-1

Nimbalkar, Manoj M

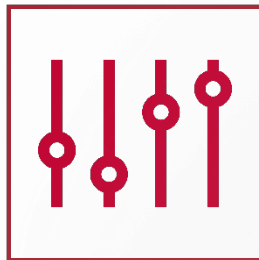
## Failure Data By Component

Type	Historical MTBF	Predicted Failure		
		15 Days	30 Days	60 Days
Well	432	4	8	6
Tubing	1821	1	3	2
Rod	997	0	0	0
Pump	2088	4	5	5

## Predicted Failure Probability (Well)

	15 Days	30 Days	60 Days
BEAM-75	72%	74%	77%
BEAM-203	53%	57%	57%
BEAM-186	53%	57%	59%
BEAM-32	53%	54%	57%
BEAM-49	52%	54%	57%





# NEXT-GENERATION AUTOMATION





Fore**Site Edge**  
GIVES YOUR WELL

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**AUTONOMOUS**

O P T I M I Z A T I O N  
C O N T R O L





# ENHANCE CONTROL WITH FLEXIBLE DEPLOYMENT



**INSTALLS  
AS A  
STANDALONE  
DEVICE**



**OR AS AN  
ADDITION TO  
YOUR EXISTING  
EQUIPMENT**



# SEE TRUE PRODUCTION PERFORMANCE IN ROD-LIFT WELLS

## LEGACY CONTROLLER



Intermittent card storage  
by Event

**1,280**

PER WELL

## FORESITE EDGE



Continuous card storage  
for every stroke

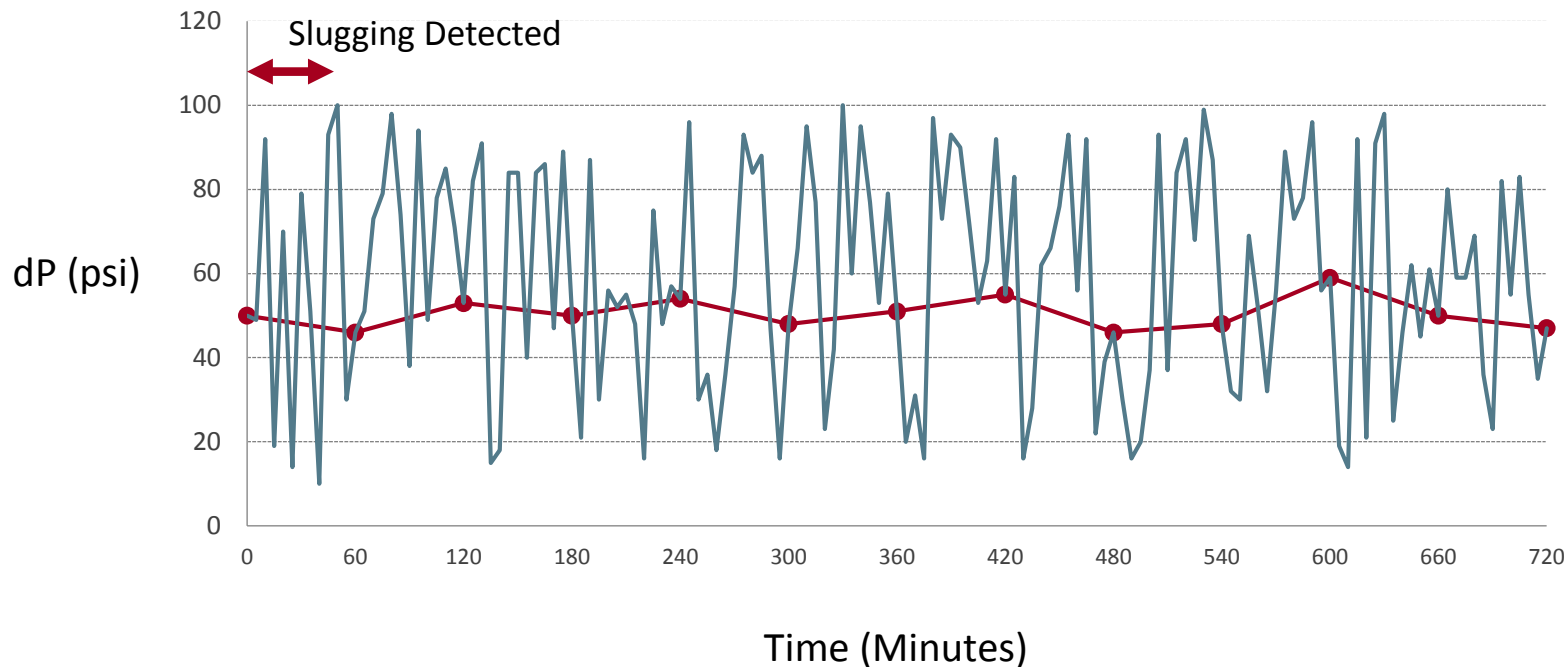
**>3.5M**

PER WELL



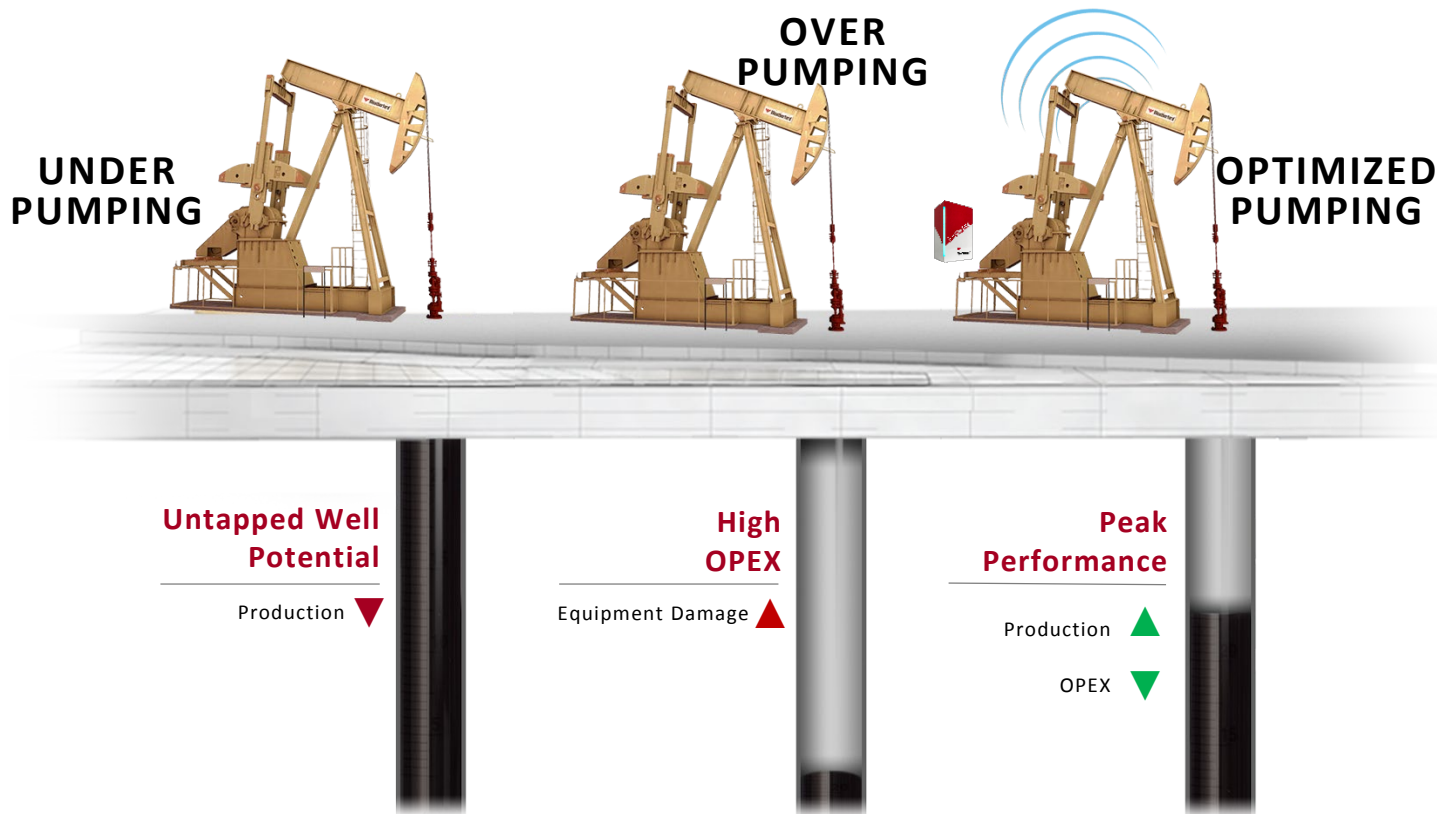


# DETECT SLUGGING, PREVENT FAILURES IN GAS-LIFT WELLS



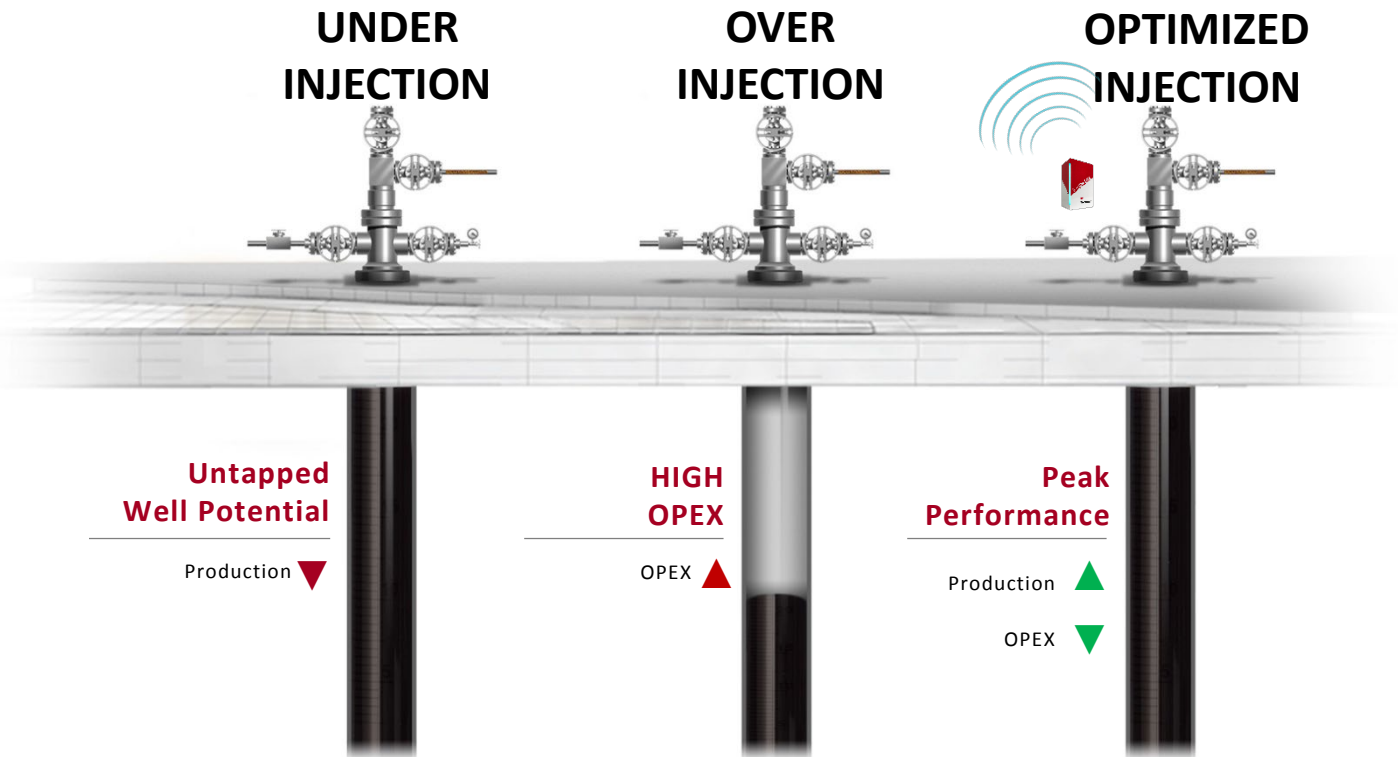


# ELIMINATE OVER AND UNDER PUMPING IN ROD-LIFT WELLS





# ELIMINATE OVER AND UNDER INJECTION IN GAS-LIFT WELLS





# SHOWCASE PRODUCTION PERFORMANCE VALUE







# SURFACE FAILURE MANAGEMENT





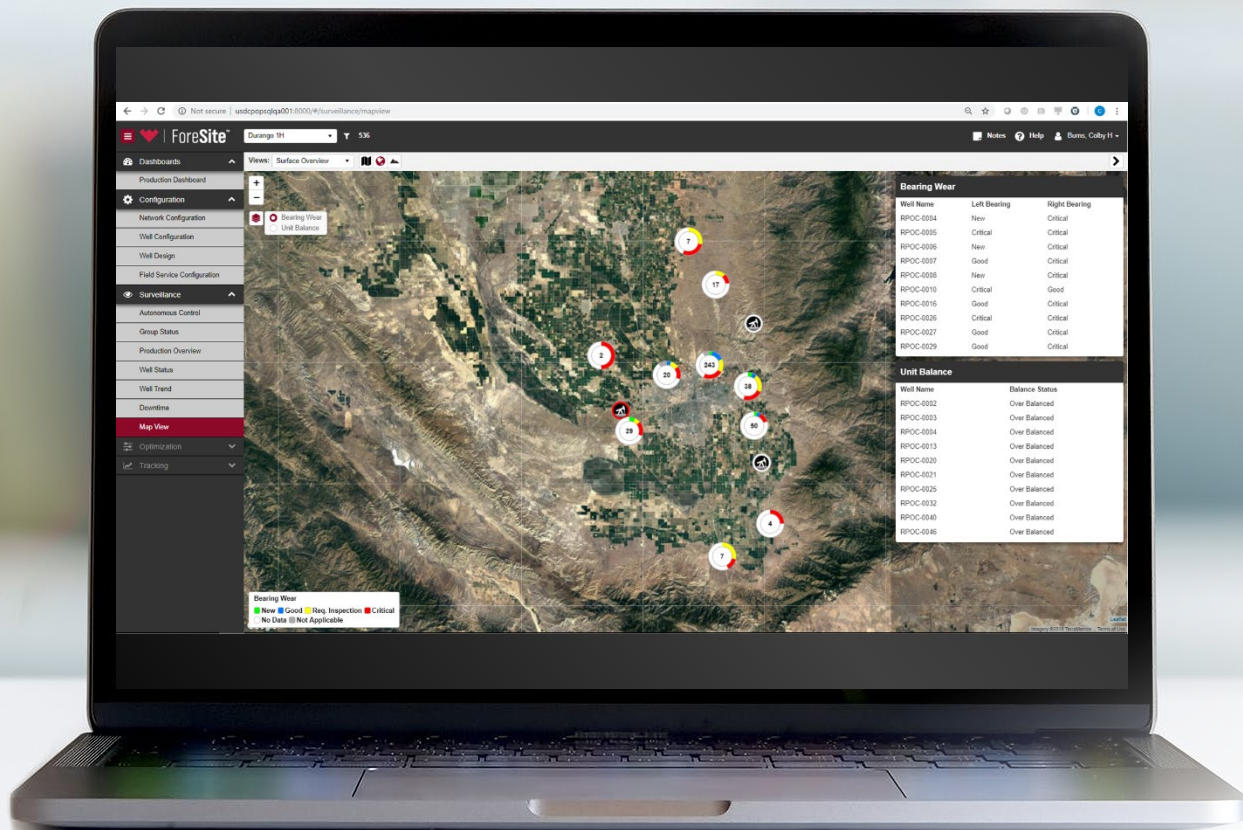
# PREDICT ROD-LIFT SURFACE FAILURES

ForeSite<sup>®</sup>  
SENSE

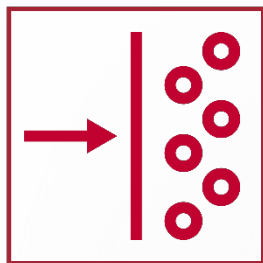




# UNRIVALED CAPABILITY: SUBSURFACE & SURFACE FAILURES







# FLOW MEASUREMENT





# IMPROVE STIMULATION IN NEW AND REFRACTURED WELLS

## TBlockSure<sup>®</sup> diverting agent

- Delivers a short-lived blocking effect
- Achieves superior zonal isolation and mechanical diversion
- Withstands treatment and dissolves at a predetermined time



# FLOW MEASUREMENT ACCURACY IS CRITICAL

1

**UNDERSTAND  
RESERVOIR BEHAVIOR**

2

**OPTIMIZE  
PRODUCTION**

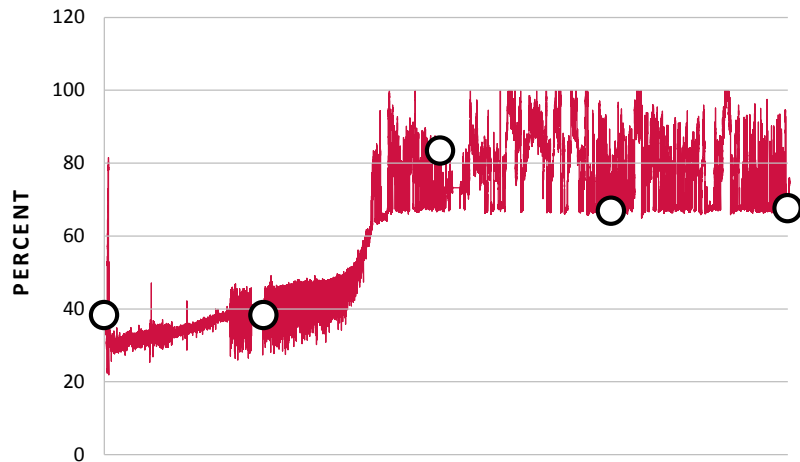
3

**REPORT  
REVENUE**

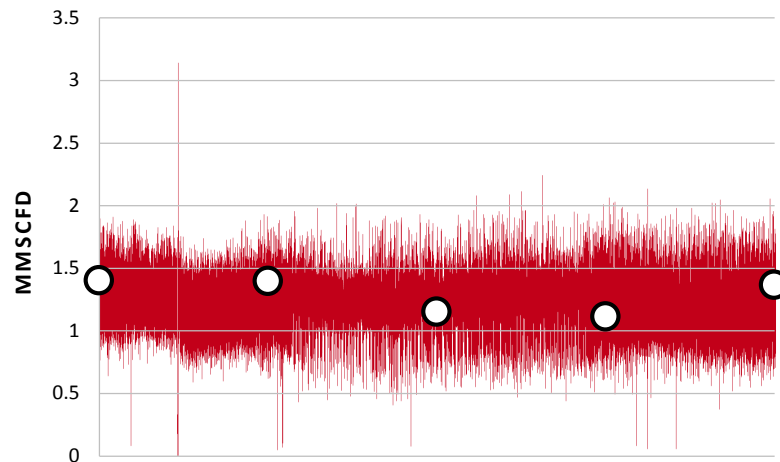


# CONTINUOUS FLOW DATA DRIVES YOUR REVENUE

## WATER CUT – CONVENTIONAL WELL



## GAS RATE – UNCONVENTIONAL WELL





# MAKING MONEY FOR YOU

**SAVED** **OMAN**  
**\$350M** Eliminated hand sampling  
by installing more than  
500 Red Eye systems

**\$315M** .....  
7 years

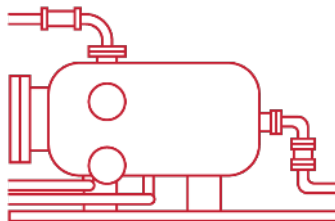


**ONGOING OPPORTUNITY**

**SAVE** **PERMIAN**  
**\$214M** Replacing test separators  
with multiphase technology  
in a 1,000-well asset

**\$36M** .....  
\$36M per year

**\$37M** .....



**\$178M** .....

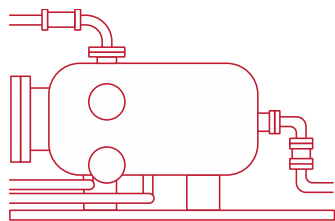
**Conventional Production**  
*Aging Well*

**Unconventional Production**  
*Wet Gas*





# BREAKING DOWN THE COST BENEFITS OF MULTIPHASE



TEST SEPARATOR

3



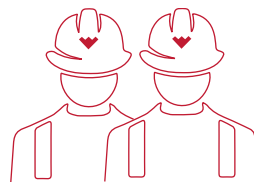
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2



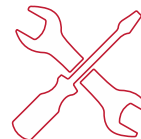
1

4



1

5

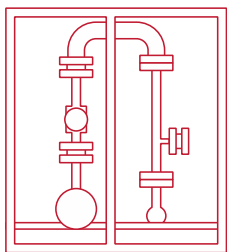


1

7



1



MULTIPHASE FLOW METER



# WORLD'S MOST COMPREHENSIVE FLOW PORTFOLIO



## **Red Eye Water-Cut Meter for Surface**

Accurate water-cut in 0 to 99.5% GVF



## **Red Eye Water-Cut Meter for Subsea**

The only multiphase subsea water-cut meter



## **VSR Wet-Gas Flowmeter**

The only non-nuclear meter for wet gas



## **VSRD Multiphase Flowmeter**

Accurate multiphase data without separation



## **REMMS**

Replaces conventional test separators to deliver real-time data



# LET'S START A NEW CONVERSATION FOR YOUR ASSET



**SONAR**  
Total mixture rate



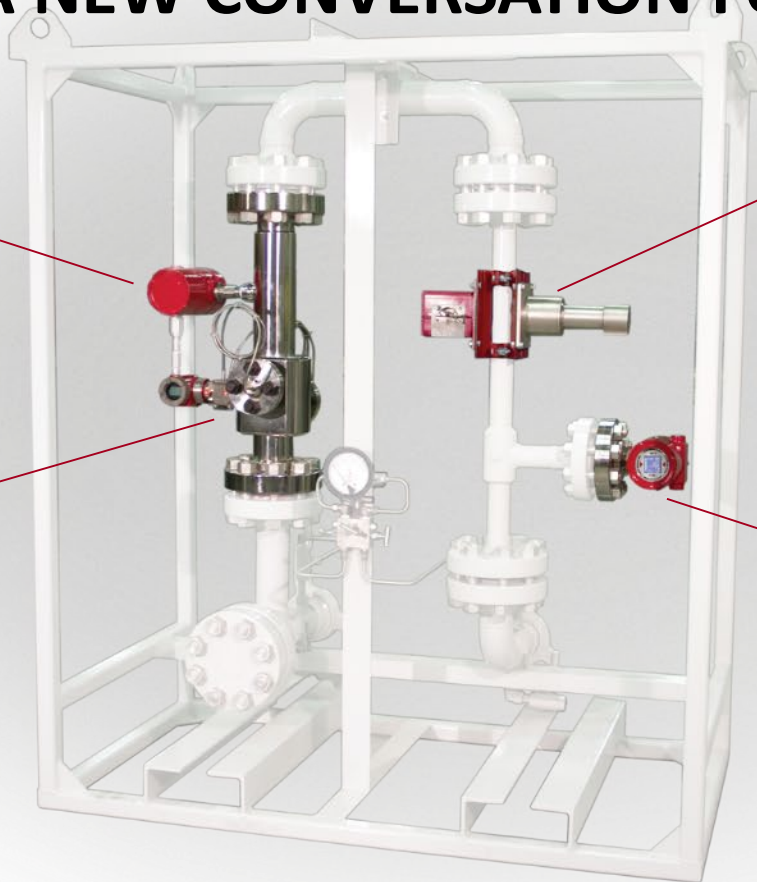
**VENTURI**  
Gas-to-liquid ratio

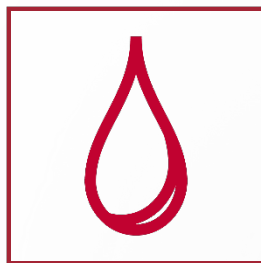


**DENSITOMETER**  
Gas-liquid ratio



**RED EYE**  
Oil-to-water ratio





# PRODUCTION PERFORMANCE MANAGEMENT







# CREATING A PATH TO PEAK PERFORMANCE





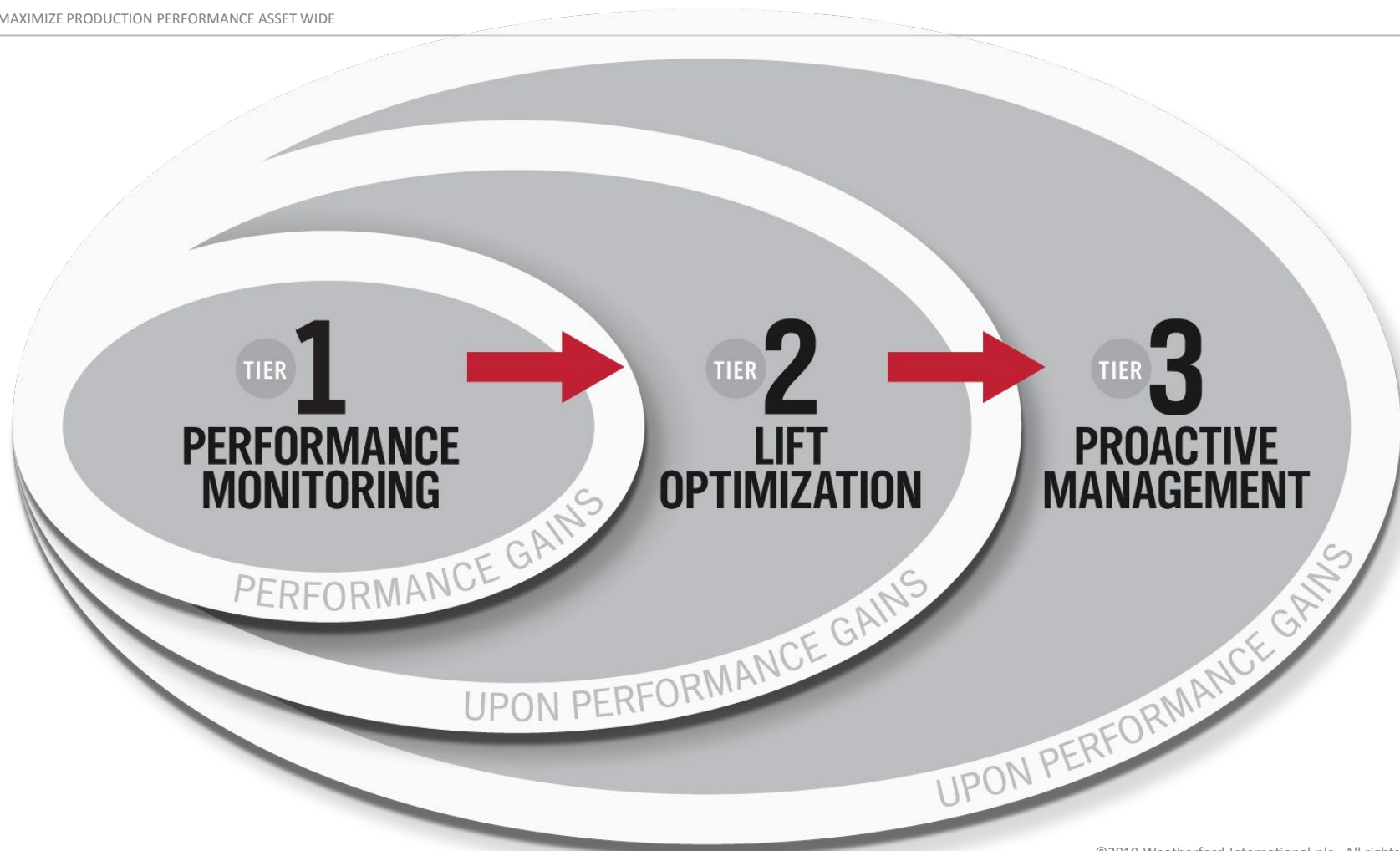
# BUILDING AN INTEGRATED TEAM

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**WEATHERFORD** as an extension of **PEMEX**

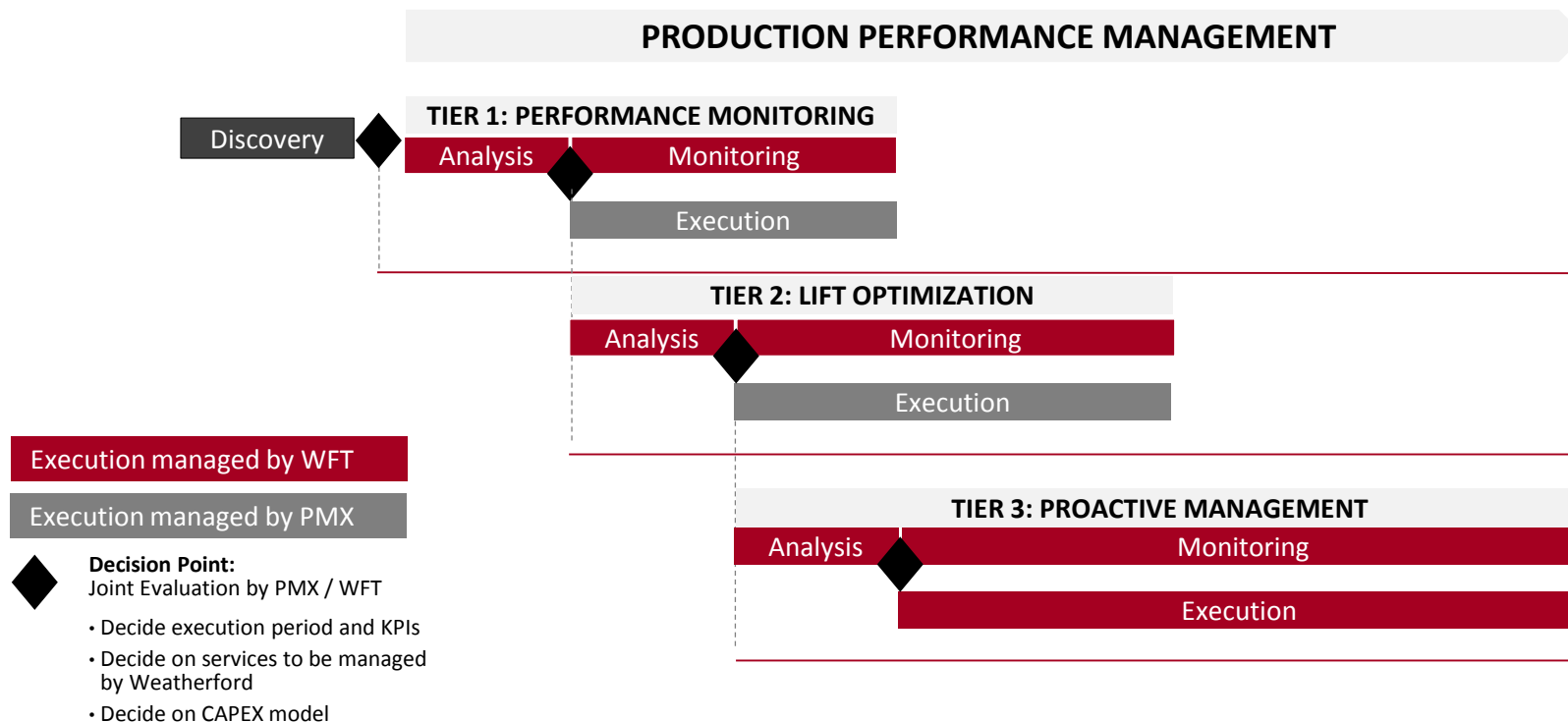
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nothing more nothing less





# ENGAGEMENT MODEL FOR PERFORMANCE GAINS







# KEY VALUES

**INCREASED UPTIME**

**REDUCED COSTS**

**ENHANCED PRODUCTION**

**REDUCED FIELD PRESENCE**

**ASSURED ASSET INTEGRITY**



The team in the room now  
is your team moving forward.

WE WILL

All operational decisions are agreed upon jointly.

Gather and analyze data

Integrate software and hardware

Execute according to plan

Manage any third-party services

Optimize workflows

Make operational recommendations

Leverage historical and real-time data

Ensure regulatory compliance

**GRACIAS**  
**THANK YOU**

