



# OPTIMAL WELL INTERVENTION



# Optimal Well Intervention

## Objectives



### GOAL

Maintain production plateau



### ACTIONS

- » Increase production rates
  - » Select artificial lift
- » Life long field lift strategy
- » Maintain pressure field wide



### SUCCESS METRICS

- » Design best intervention strategy for cost



### RESERVOIR DRIVERS

- » Accurate reservoir description
- » Controlled drawdown
- » Reliable forecasts

ARCHITECTURE & HETEROGENEITY | WELL PRODUCTIVITY | RESERVOIR CONNECTIVITY



### PRODUCTION DRIVERS

- » Minimize # interventions
- » Cost efficient detection & treatments
- » Cost efficient production system for entire life

DESIGNED LIFT STRATEGY | ADVANCED ANALYTICS

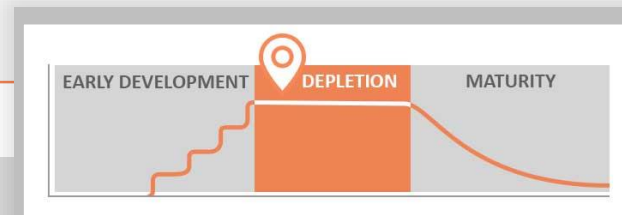


## DECISIONS MADE

- » Identify production issue & implement right intervention method

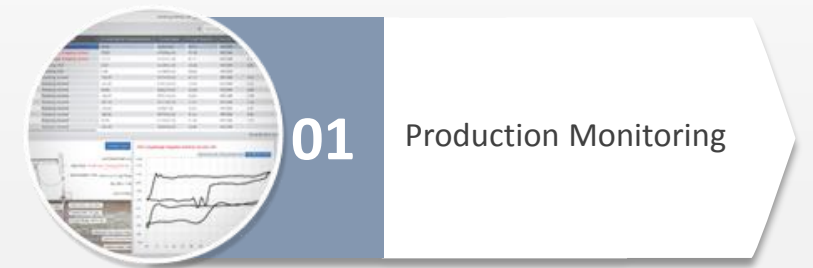
- » Select appropriate lift technology through out field life cycle

- » Optimize capital deployment



# Well Interventions - Artificial Lift

## Traditional Workflow



- » Identify production issue & implement right intervention method
- » Design lift type for life of well
- » Monitor production & optimize production equipment



# Well Interventions - Artificial Lift

## Reservoir Driven Workflow

01

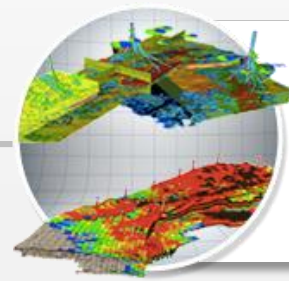
Seismic processing  
Interpretation  
Attributes

02

Well logs  
Cores  
Well tests

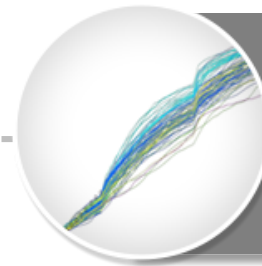
03

Geological  
knowledge



04

Reservoir Models



05

Dynamic Simulation



06

Production Monitoring

- » Enhance reservoir description by extracting maximum information from data
- » Reconcile through the construction of multiple possible realistic reservoir models
- » Identify compartments, flow barriers and highways

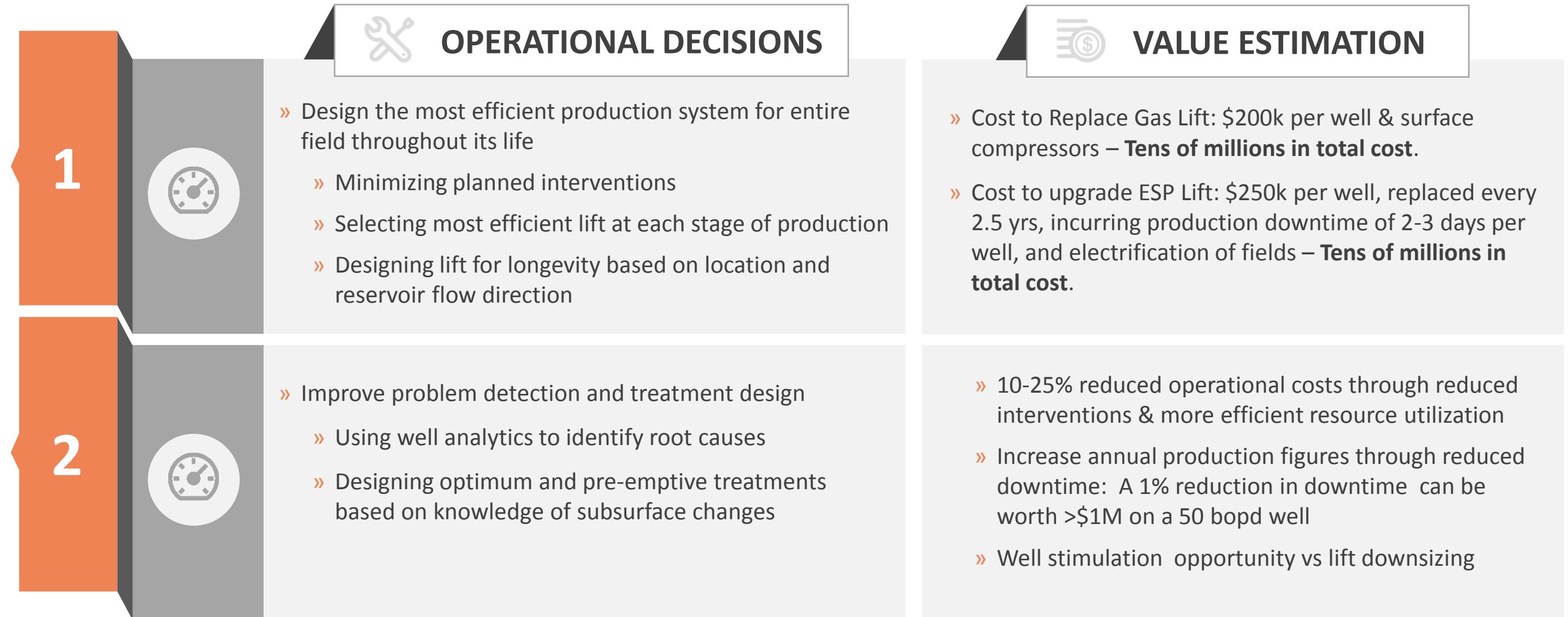
- » Calibrate models to production history
- » Investigate alternative geological scenarios
- » Propose forecasts

- » Identify production issue & implement right intervention method
- » Design lift type for life of well **based on reservoir inflow predictions**
- » Monitor production & optimize production equipment



# Optimal Well Intervention

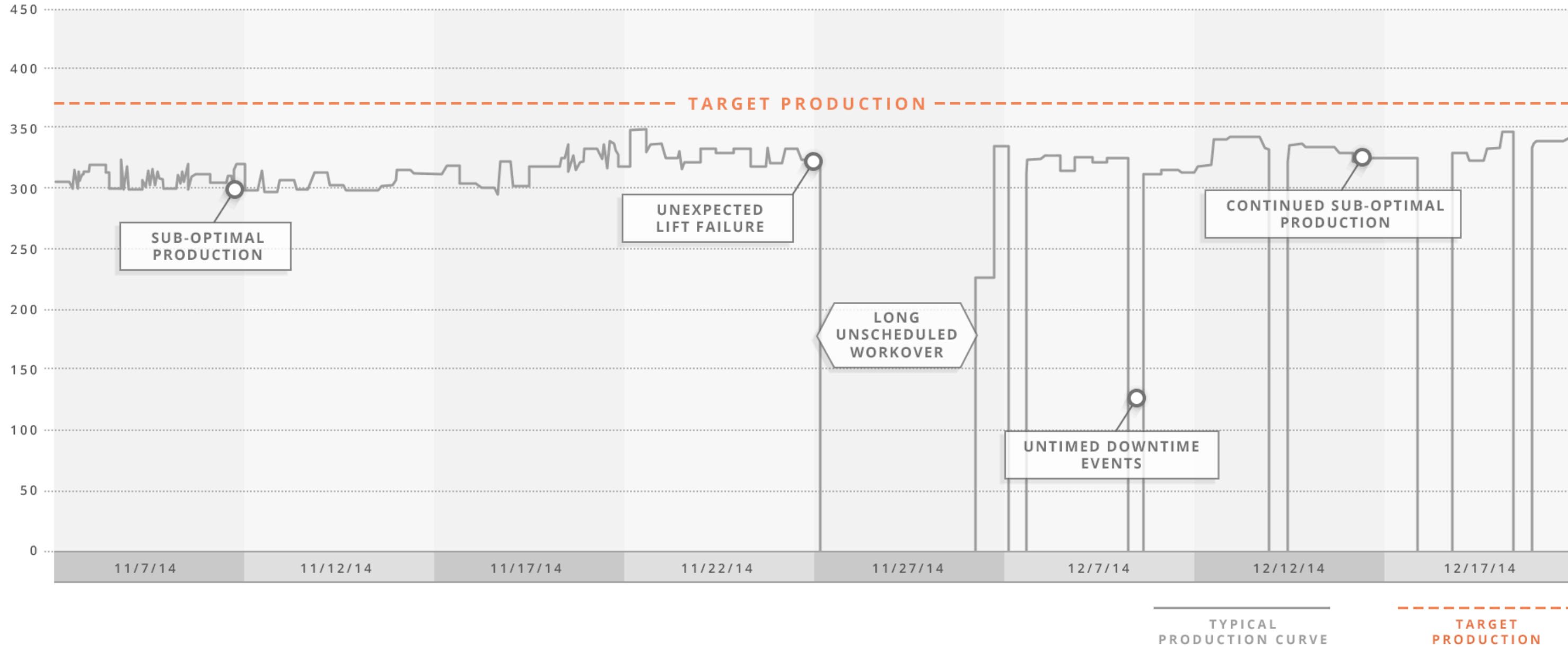
## Benefits



# Optimal Well Intervention

## Enhancing the Production Curve

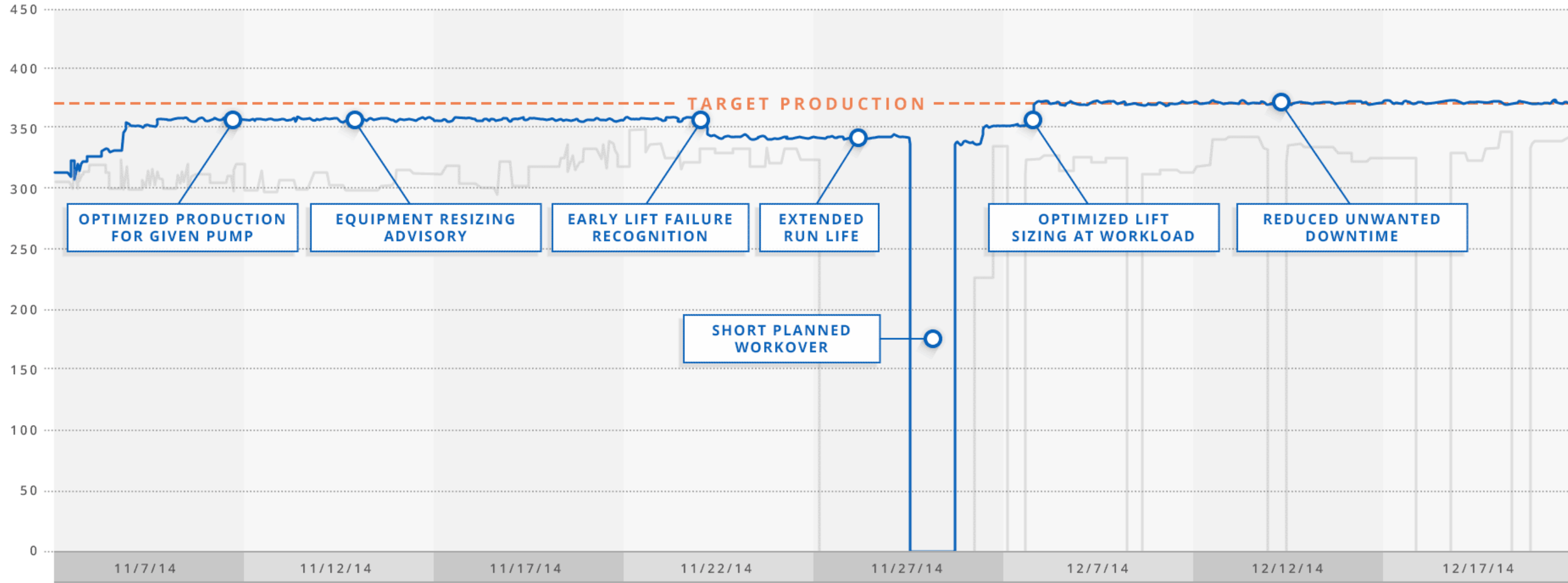
OPTIMAL WELL INTERVENTION:  
RESERVOIR DRIVEN PRODUCTION  
OPTIMIZATION



# Optimal Well Intervention

## Enhancing the Production Curve

OPTIMAL WELL INTERVENTION:  
RESERVOIR DRIVEN PRODUCTION  
OPTIMIZATION



OPTIMIZED WITH  
FIELD VANTAGE™

TYPICAL  
PRODUCTION CURVE

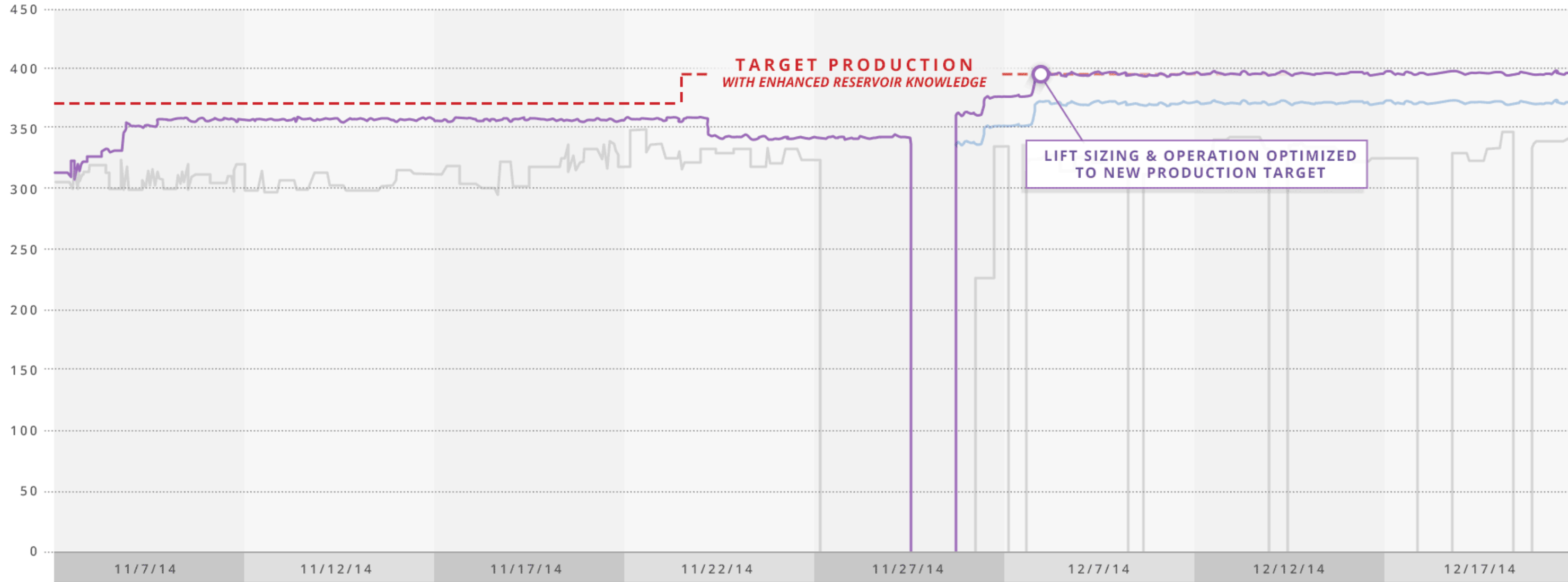
TARGET  
PRODUCTION



# Optimal Well Intervention

## Enhancing the Production Curve

OPTIMAL WELL INTERVENTION:  
RESERVOIR DRIVEN PRODUCTION  
OPTIMIZATION



PRODUCTION CURVE  
OPTIMIZED TO NEW TARGET

TARGET PRODUCTION  
WITH RESERVOIR INSIGHTS

OPTIMIZED WITH  
FIELD VANTAGE™

TYPICAL  
PRODUCTION CURVE

TARGET  
PRODUCTION

