

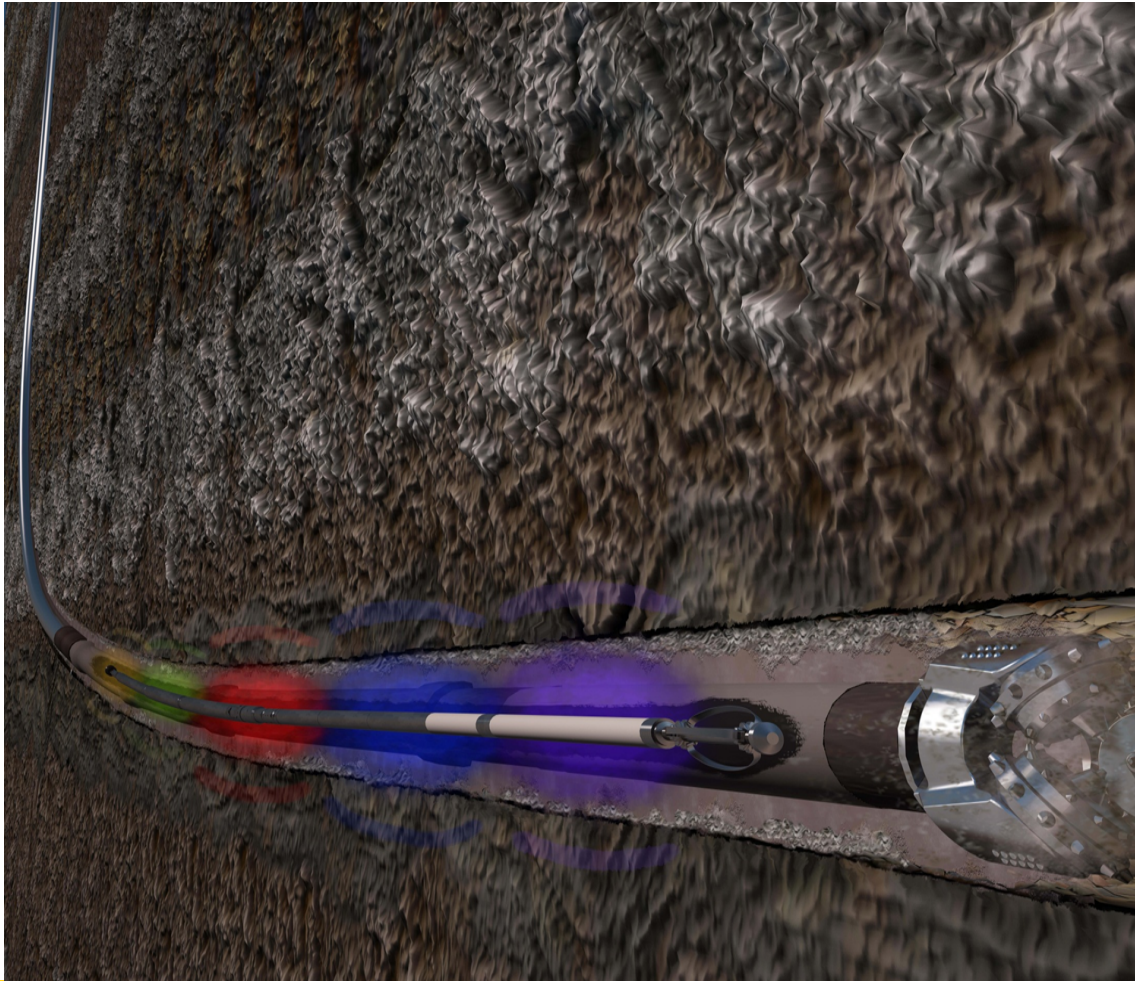


Cordax Logging While Tripping

Ricardo Quintero, Sr VP Operations

Ricardo.Quintero@cordax.com

Description / Image of the Product



- Cordax Evaluation Technologies
- Logging While Tripping
- Full Formation Evaluation
- Completion Optimization
- Low Cost, Low Risk, Low Rig Time for Continuous ROI Improvement

Team Members & Brief Bios

Ricardo
Quintero

- Sr VP Operations – Company Co-Founder Worldwide Operations and Global Business Management

Don
Herman

- US Sales and Business Development – Driving Customer adoption since 2016 in rapidly growing US business environment

This is who we are

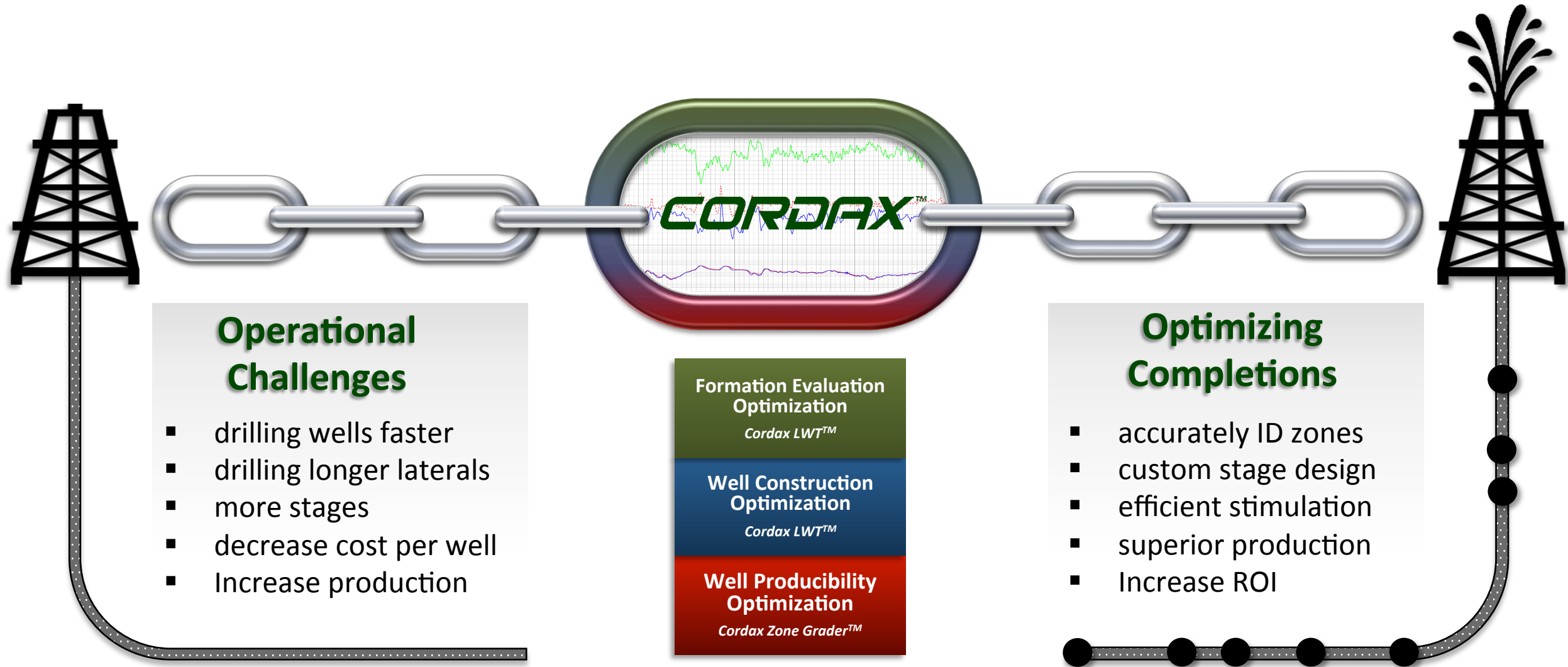
- John King – Chairman of the Board
 - Maarten Propper – CEO
 - Ricardo Quintero – Sr VP Operations
 - Mike Carter – VP Geoscience
 - Don Herman – US Sales and Business Development
- Company started as Datalog in Calgary, commercialized in 2011
 - Cordax Management team acquired technology in 2016
 - Subsequent 3 years have seen excellent growth
 - US, Canada and International presence

This is our vision

- Cordax has created a system that allows operators to continuously improve Frac Operations (decrease frac expense)
- Cordax has created a system that allows operators to improve Frac Efficiency – and Improve Productions
- Roughly 1% of lateral wells are logged with Open Hole Data
- Cordax provides a low cost, low risk, little rig time methodology to obtain quality data
- As part of the package, Cordax provides Formation Evaluation and Completion Optimiztion tools.
- The net result to the Operator is improved ROI

CORDAX - HELP WITH CONFLICTING OBJECTIVES

CORDAX™



This is our mission

- Cordax Evaluation Technologies – Goal is to provide a low cost low risk system to compete with the 1% or laterals that get logged, and more importantly, the 99% that currently are completed blind.
- Prior to wells being drilled laterally, nearly 100% were logged.
- Since, logging has virtually stopped due to cost, risk and rig time expense.
- Wells are logged to understand geology and design completions.
- With Cordax, Operators can once again effectively log their wells.

Why Log The Laterals??

- Understand Your Formation Better along the lateral
- Optimize Your Completions
- Proprietary ZoneGrader, ZoneTuner™ completion optimization software
- Understand your well performance and improve incrementally

Operators Can Now Log Every Well.... Again!!

- LWT works in all wells: vertical, deviated and lateral
- Low Cost, Low Risk, Tool for Continuous Improvement

What we want to achieve

- The goals of Cordax is for operators to utilize an effective system to improve their return on investment.
 - In addition to better understanding their geology, reducing frac costs and improving production,
 - In this market of intense consolidation, having data in the data room is key
- Provide flat rate package pricing that makes AFE's dependable.
 - Provide low cost, low risk solutions.
 - Become part of the 'factory' for continuous improvement.
 - Help operators improve their bottom line and provide good news for their investors and shareholders.

This is our technology or process

- Cordax provides a full service offering to operators.
- Obtain cost effective open hole data
- Provide full formation analysis, including mechanical rock properties
- Provide completion optimization tools
- Provide look back engineering to evaluate effectiveness of frac operations and insights for continuous improvement

OPTIMIZING COMPLETION DESIGN - THE PROCESS

**Well Productivity
Optimization**
Cordax Zone Grader™

While Drilling.....During Trip Out.....Immediate Evaluation.....Optimized Perforating

(Invisible to drilling operations)

Drilling Data

- WOB, RPM, ROP
- MWD/GR
- MSE

Mud Logs

- Grain size, etc.
- Mud log lithology
- Gas shows

LWT™

- **Resistivity**
- **Formation Density**
- **Neutron Porosity**
- **Spectral Gamma Ray**

ZoneGrader™

- **Geomechanical**
 - Rock Mechanical Properties
 - Lithology
 - Brittleness / Stress
 - Predict Breakdown Pressures
- **Producibility**
 - Lithology
 - TOC
 - Porosity / Permeability
 - Saturation
 - Stimulation Analysis

ZoneTuner™

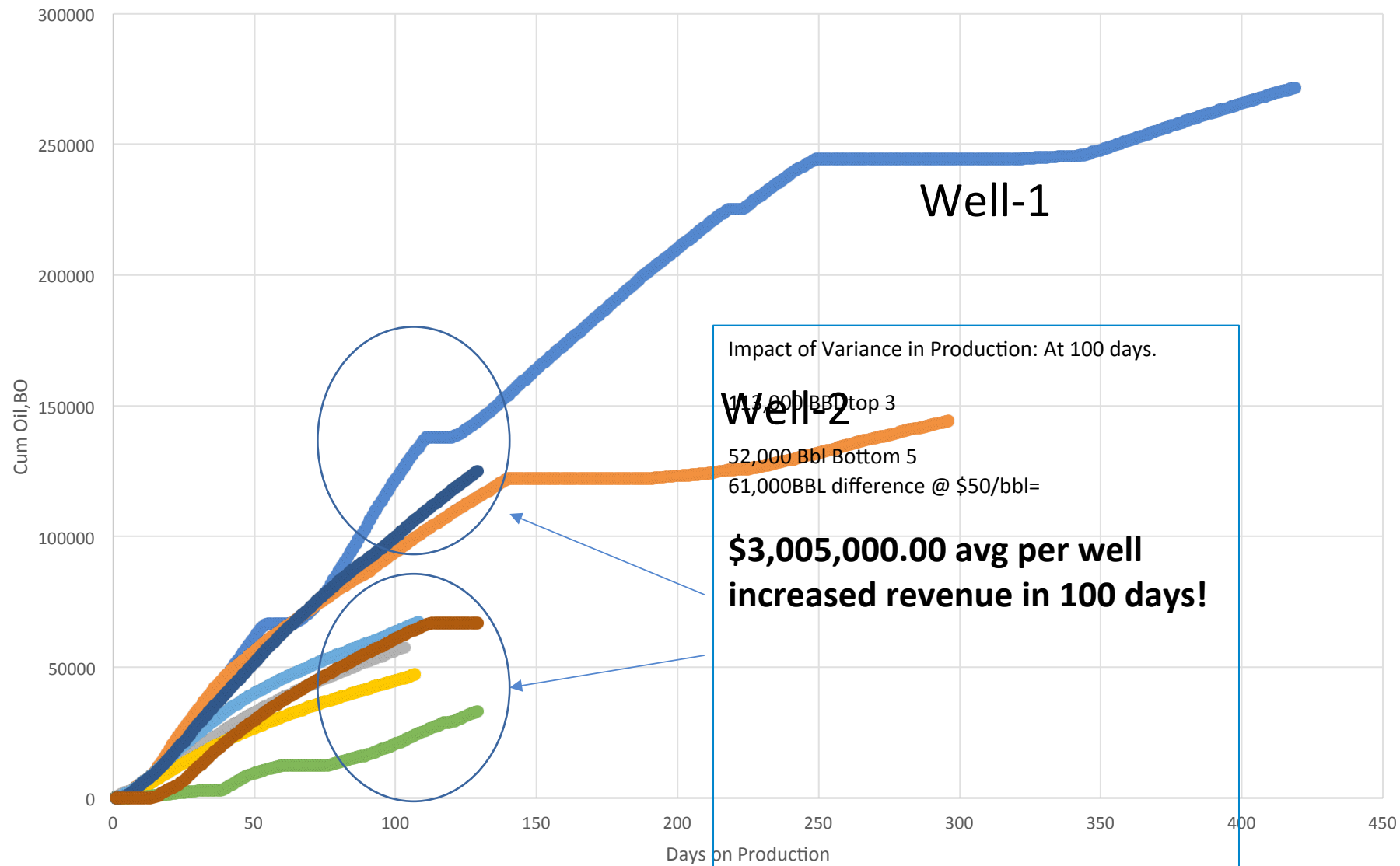
- **Perf Placement**
 - Mechanical Properties
 - Reservoir Qualities
- **Shaped Charge Optimization**
 - Equal Entrance Hole
 - Tunnel Volume
- **Gun System**
 - Addressable/RF SAFE
 - Shot Phasing/density

**Optimized
Frac & Completion
Design**

Here are examples of successes

- Cordax validations
 - Look back results on frac operations and cumulative production
- Lower overall Hydraulic Horsepower needed.
 - Less pump time and proppant used.
 - Pump savings are more than logging costs
 - By placing clusters in the optimum location, production increases are achievable.
 - Data in the data room can drive higher acquisition numbers

IMPACT OF WELL VARIANCE

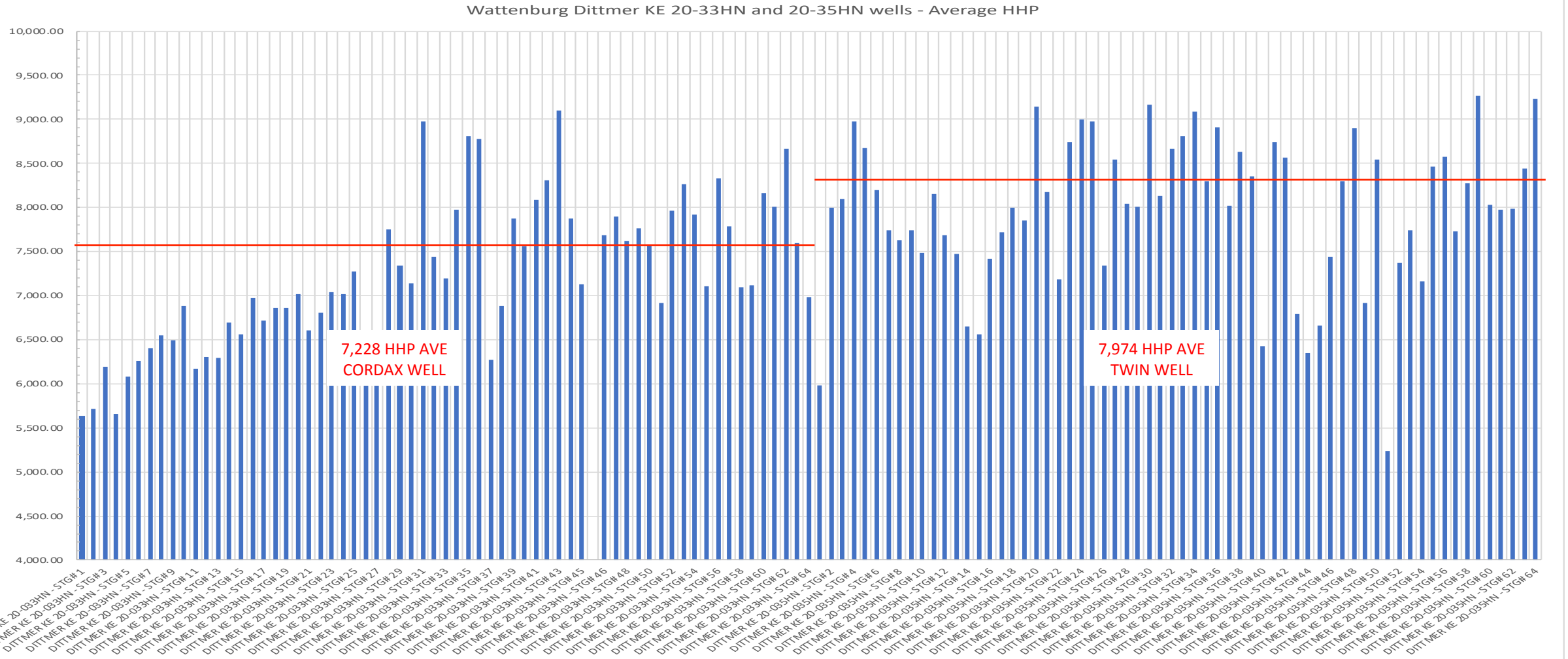


Production can vary because:

- 1) Completion efficiency
- 2) Formation quality

CORDAX SAVES HORSEPOWER

- When just comparing the 20-033HN CORDAX completed well with it's twin well (20-035HN).
- The hydraulic horsepower (HHP) for each stage was computed and shown in the plot.



A reduction in HHP was observed of 9.4 %. Reductions in pumping charges results in \$88,900 and \$148,200 savings per typical well.

Short-term plan

Long-term plan

How will it work? Is it working now?

- Is the Cordax technology proven?
 - Does it work?
- Global operations.
 - More than 1300 wells have been logged
 - Operating efficiency above 99%
 - Majors, independents of all sizes

CORDAX LWT - DOES IT WORK? IS THE DATA ANY GOOD?

CORDAX™

Proven field execution with over 1300 successful jobs

Performed since 2011

Qualified Data with >30 “Log-offs”

Against Schlumberger, Weatherford, BakerHughes and Halliburton



★ Sales and Operations Centers

📌 LWT jobs performed

- With the Cordax system, Operators have the opportunity to log every type of well drilled.
- Primary target is lateral wells. Most cost effective, low risk system in the market.
- Cordax can also address any vertical, deviated and S Shaped well that cannot obtain wireline logs.
- Operators can truly get logs on any well they can get to TD with our collars in place.
- Cordax is happy to provide a detailed operational presentation at any time.

SWOT Analysis

- Strengths

- Weaknesses

- Opportunities

- Threats

Action Steps

More information

- Please contact Don.Herman@cordax.com for more information or
- Check out our website at www.cordax.com