

The Midland Basin Learning Tree:

Top Lessons Learned That Led to an 82% Improvement in Drilling Efficiency Since 2014

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Abstract

Laredo Petroleum ramped up horizontal Wolfcamp drilling activity in the Midland Basin in 2013 reaching a peak of 8 horizontal rigs operating in the second half of 2014. This presentation will highlight the top lessons learned that led to an 82% improvement in total drilling efficiency and a 13 day reduction in average drilling days along with a 28% increase in lateral length since 2014.

Outline

1. Low Hanging Fruit

- i. Short Bit-to-Bend Motors and Directional Drilling QA/QC
- ii. Hole Cleaning: Topdrive RPMs in the Lateral and Cleanup Cycles
- iii. Proactive Timing of Max Expected Mud Weight

2. Bulk of Fruit

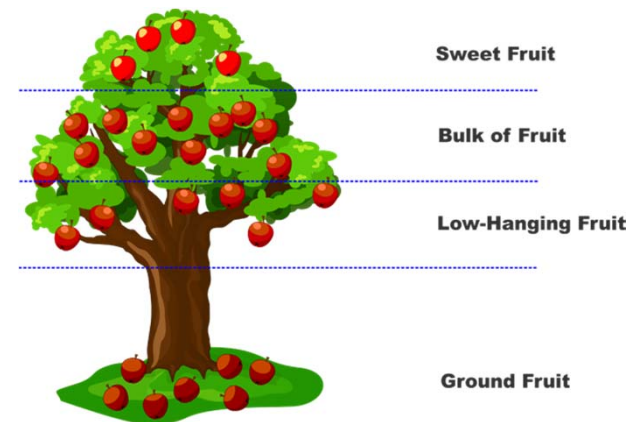
- i. 12-1/4" BHA Design Optimization
- ii. Motor Drilling with Differential Pressure vs. WOB
- iii. Auto-driller Calibration and Pushing Limits

3. Sweet Fruit

- i. 7,500 psi Rated Rigs Provide Optimal Hydraulics

4. Ground Fruit (Bittersweet)

- i. Earth Model Targets Improve Well Productivity/Economics but offer new challenges for Drilling Department
- ii. Effect of Reduced Rig Counts on Talent Pool



**“No matter how big the plate in front of you is,
the only way to finish it is one bite at a time.”**

Unknown Marine Corps Sergeant via Reddit.com

Title of the article: *“What is something someone said to you that changed your way of thinking forever?”*

Low Hanging Fruit: Directional Drilling, Hole Cleaning, Mud Weights

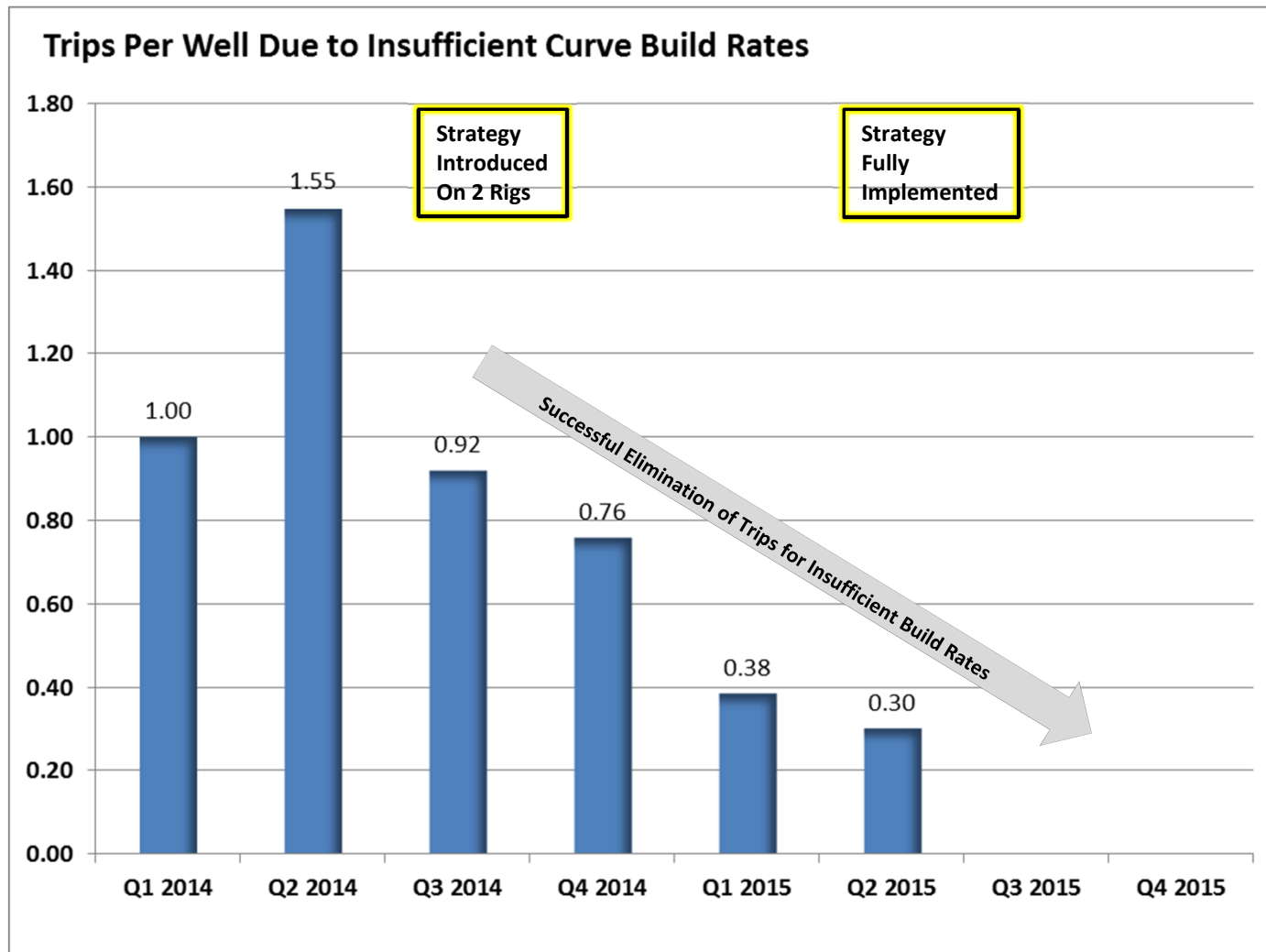
2014 Observations

1. Directional vendors had motors with 5.5' to 6.5' bit-to-bend and abnormally high occurrence of motor & MWD failures
2. Dedicated curve BHA with planned trip for lateral BHA still often resulted in insufficient build rates
3. Curves planned on 10°/100' with early kickoff
4. Topdrive RPMs = 45-60 while drilling lateral
5. Raise Mud Weight after tight hole is encountered (reactive)
6. 1 to 2 bottoms up at low RPMs before POOH
7. Cuttings beds often misdiagnosed as insufficient mud weight or instability; packoff ensues

New Best Practices

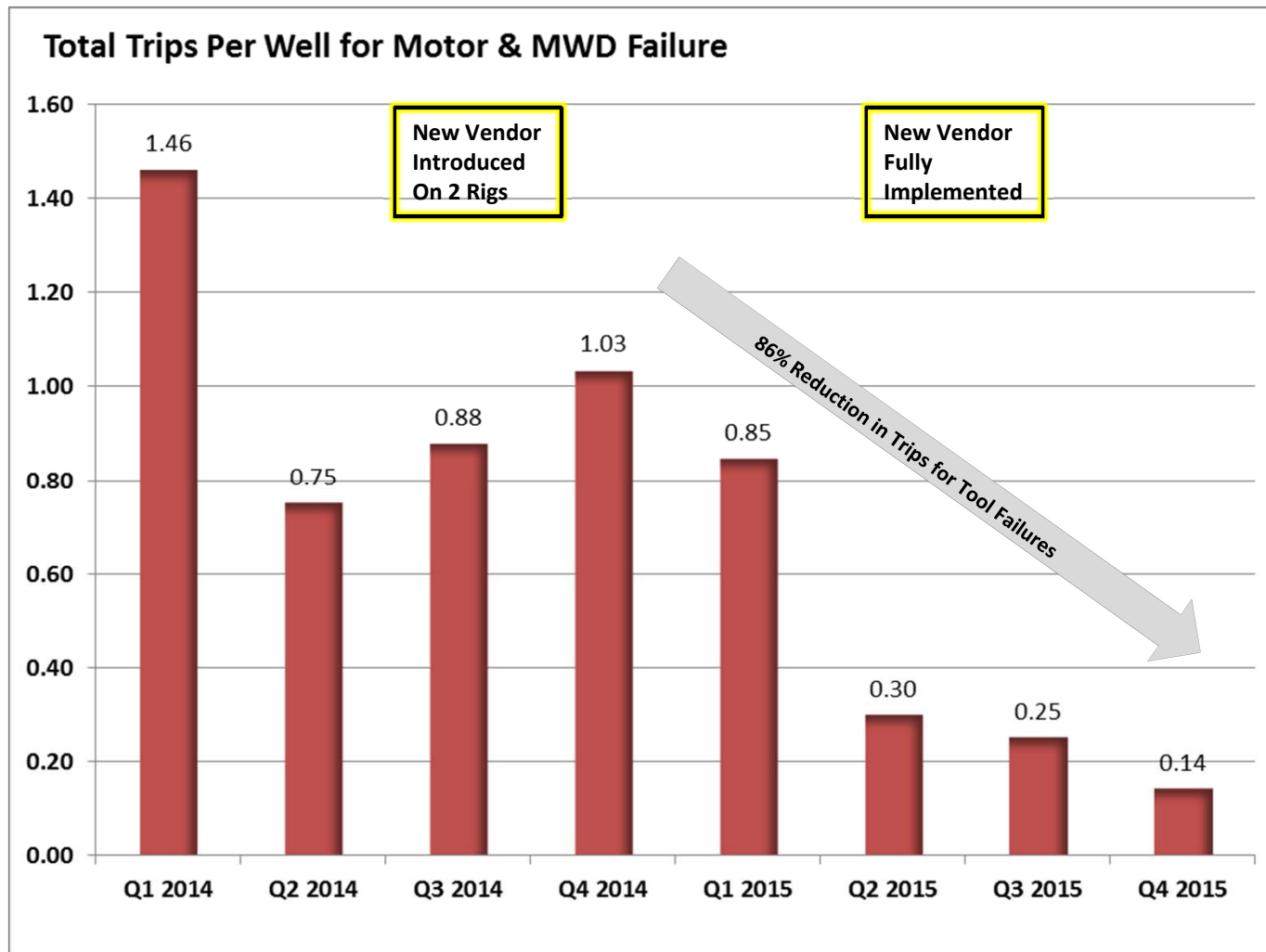
1. Introduced new directional vendor with short bit-to-bend motor (4.2') and much better tool reliability
2. "One-Run" curve/lateral BHA with 1.83° bend
3. Curves planned on 8°/100' to eliminate trips for insufficient build rates
4. Topdrive RPMs = 75-85 while drilling lateral (optimal hole cleaning while drilling)
5. Proactively raise Mud Weight to Max Required PPG by 60 deg in the curve
6. Circulate 1 hour per 1000' of lateral at 100 RPMs or until shakers clean up. Utilize trend sheets.
7. If the hole is clean, tight hole must be geometry or instability (we need more MW)

Eliminating Trips in the Curve with “One-Run” BHA Strategy



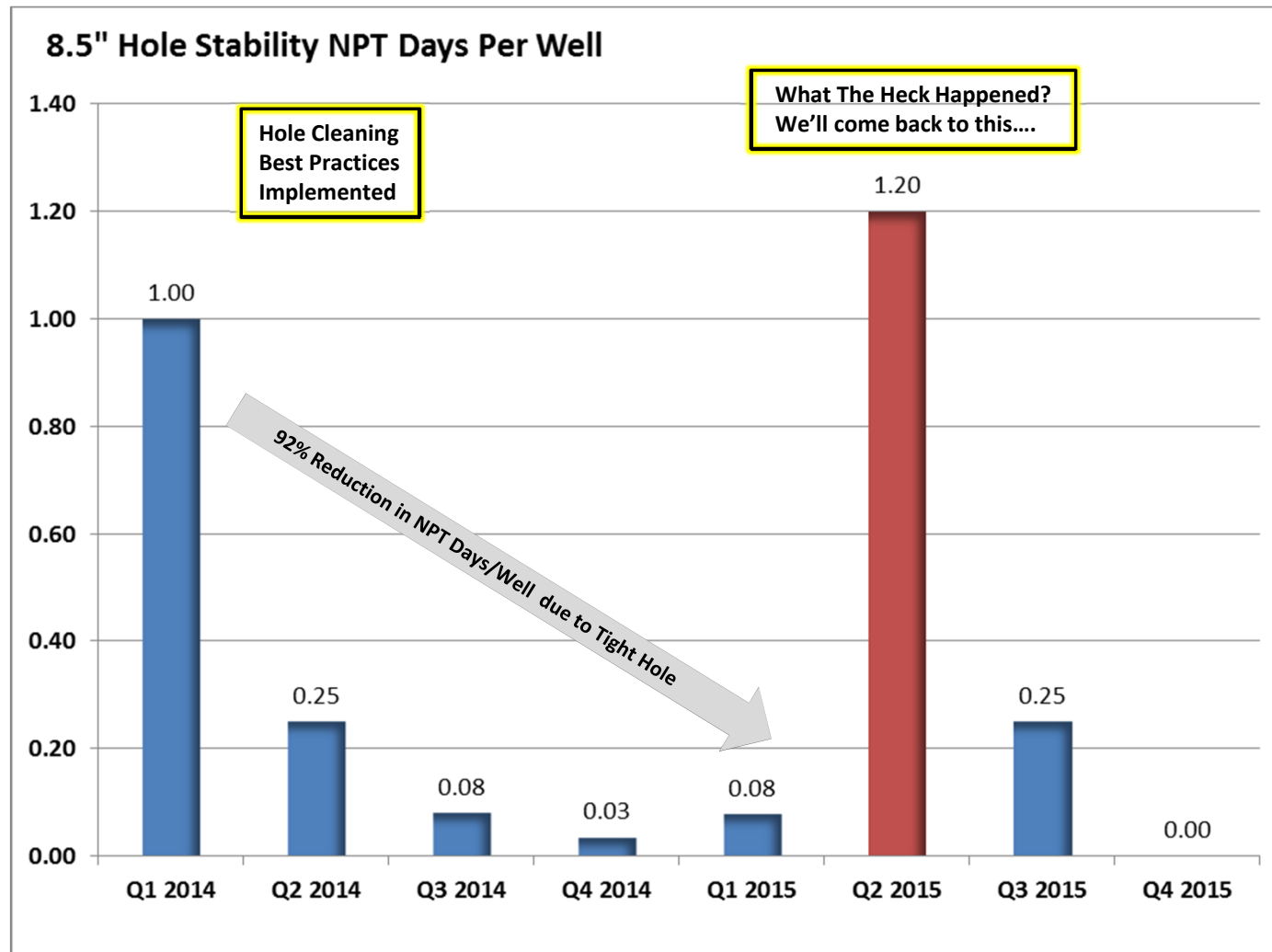
- 4.2' bit-to-bend 1.83° motor achieves 12-14°/100' yields but can be rotated at 100 rpms which allows one-run BHA strategy
- Reducing planned curve doglegs from 10° to 8°/100' eliminates trips for insufficient build rates while giving up 100' of lateral
- Each trip costs about \$80-100,000 due to rig spread rate, cost of new bit, and motor/MWD repair (NPT cost = ± \$3MM in Q2 2014)
- Data includes all target zones with the exception of 3 exploration wells

New Directional Vendor with Improved Reliability



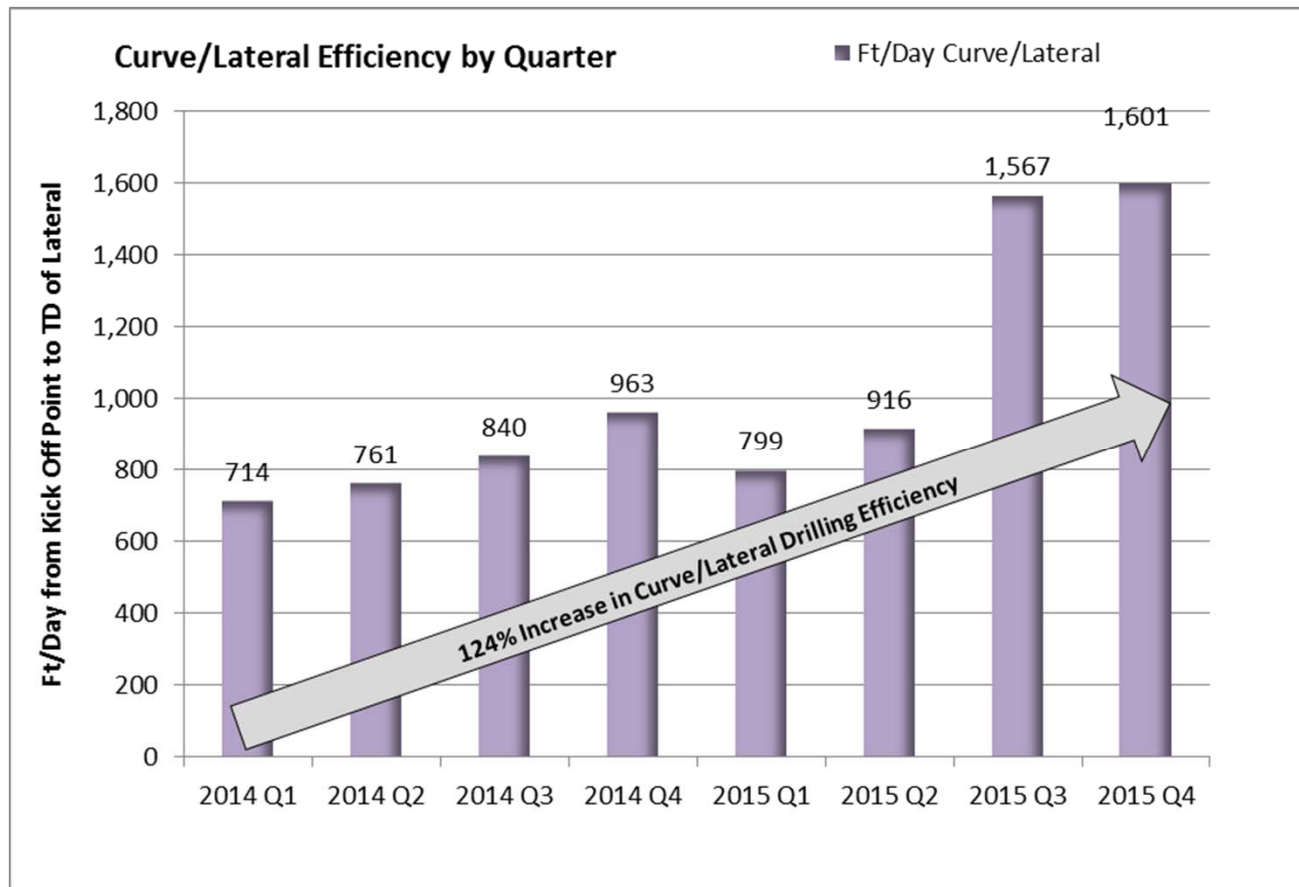
- Each trip costs about \$80-100,000 due to rig spread rate, cost of new bit, and motor/MWD repair
- Tool reliability NPT cost = ± \$2MM in Q1 2014
- Data includes all target zones with the exception of 3 exploration wells

Production Wellbore Stability and Hole Cleaning



- Proactively raise Mud Weight to Max Required PPG by 60 deg in the curve
- Circulate 1 hour per 1000' of lateral at 100 RPMs or until shakers clean up. Driller fills out trend sheets.
- If the hole is clean, tight hole must be geometry or instability (we need more MW)
- Data includes all target zones with the exception of 3 exploration wells

Curve/Lateral Efficiency Has More Than Doubled



Fleet Record:
 Ensign 151
 Sugg A171 8SM
2,658 ft/day
11,131' in 4.2 days

- 124% improvement in efficiency since 2014 is equivalent to cutting 6.8 days from an average 8-1/2" interval
- Ft/Day is total footage from curve kick-off point to TD divided by total days including trips (includes all Hz wells drilled)
- Performance drivers include:
 - Focus on data analysis to identify best practices, top performing rigs, and top performing drilling foreman
 - Optimized drilling parameters: aggressive differential pressure to improve ROP, and a minimum of 70 rpms for optimal hole cleaning in the lateral
 - New directional vendor with high performance mud motor with short bit to bend (4.2') for improved sliding efficiency and one-run BHA strategy
 - Reduced planned curve dogleg severity from 10°/100' to 8°/100' to eliminate unplanned trips due to insufficient build rates
 - Optimized mud weight strategy at landing point for each target zone
 - Increase in percentage of wells targeting UWC/MWC formations

Bulk of Fruit: 12-1/4" Intermediate Section Drilling Practices

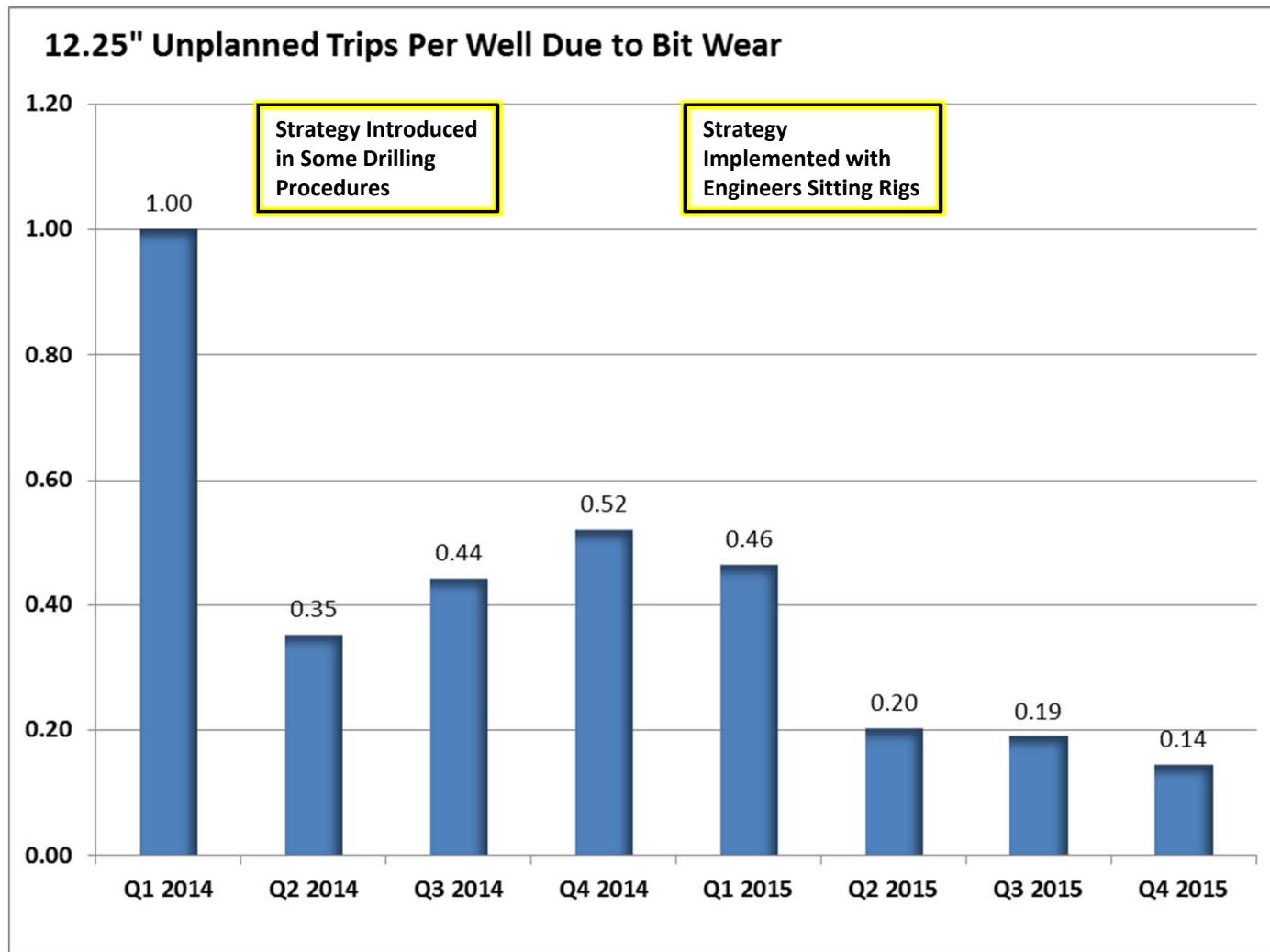
2014 Observations

1. Typical 12-1/4" BHA included 8" mud motor
2. Typical 12-1/4" BHA included (1) stand 8" DC + (6) stands of 6" DC + 5" HWDP
3. Most drilling foreman focused on WOB even with a mud motor in the hole (many of them came up on vertical rigs that drilled without mud motors)
4. Most foreman "backed-off" drilling parameters for "harder" formation tops
5. "That DBR charge is \$30k...I better not tear up this bit or I'll get run off" or "I tore up that last bit... I must have run too hard on it. We need to run lighter on it."
6. Auto-driller settings were not a focus
7. Common to see max differential pressure of 250-400 psi and 70 rpms

New Best Practices

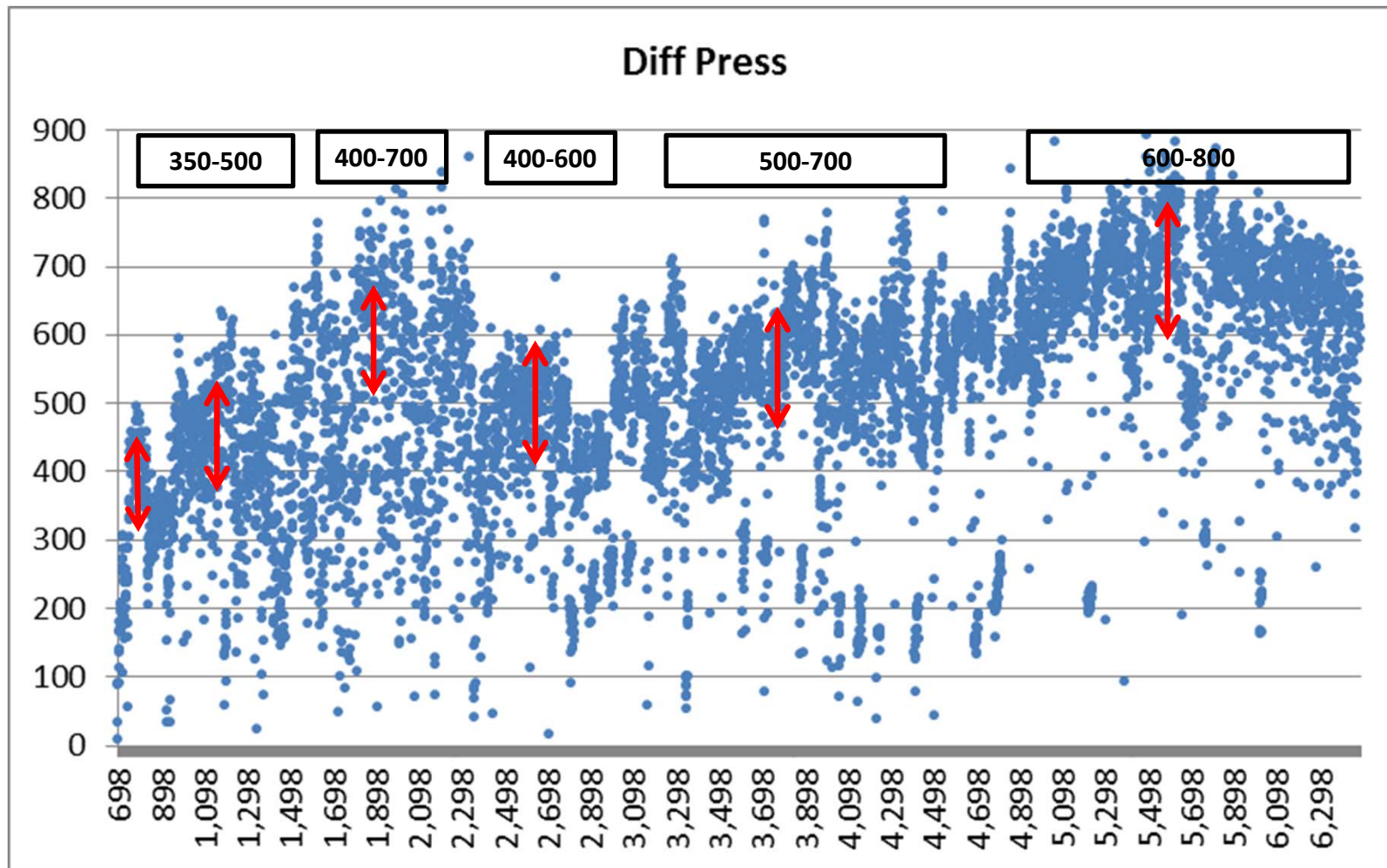
1. New directional vendor w/ hybrid mud motor: 9-5/8" bearing x 8" power section rated to 1,000 psi diff
2. Run (3) stands of NC56 8" DC + (2) stands of HWDP (eliminate 6" DC). NC56 is 12x more resistant to fatigue vs. 6-5/8" Reg connection.
3. Ignore WOB and drill exclusively using target differential pressure of 400-800 psi
4. The rock types and rock hardness (compressive strength) changes dramatically through this section. Because of this, we have to ignore WOB and drill off of differential pressure
5. When you back off WOB/Diff parameters, you actually induce more bit impact damage due to vibration. You must keep the bit engaged.
6. Avoid "slamming" weight on the bit by controlling ROP setting with auto-driller. Setting needs to be just above actual ROP that the rock is giving you. You have to constantly "chase" the ROP.
7. Recommend 55-60 RPMs to prolong shoulder life and to allow bit to engage, and 800 gpm after the BHA clears the casing shoe (as allowed by losses and pump repairs). Target 400-800 psi diff.

Focus on 12-1/4" Best Practices Reduces Bit Wear



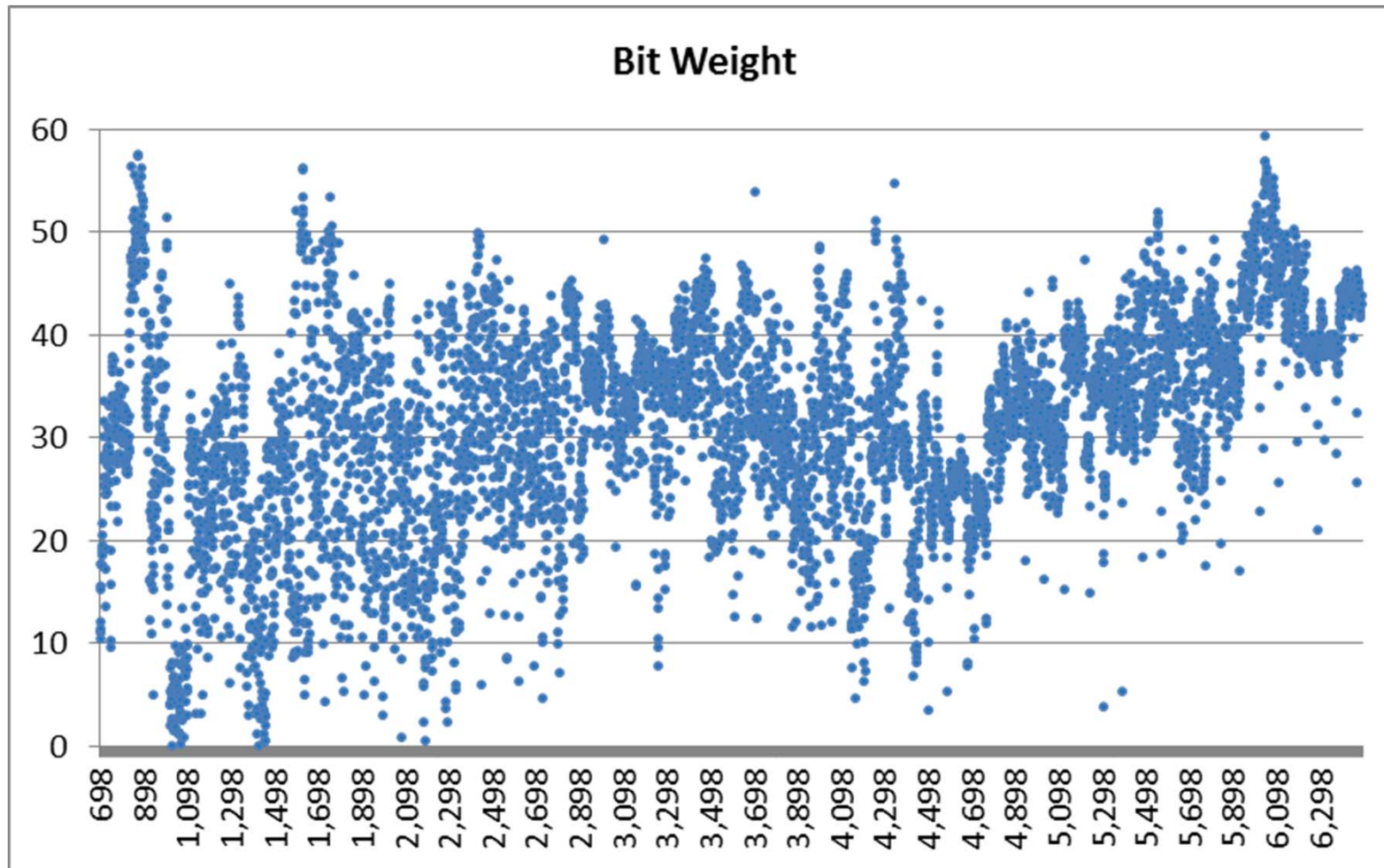
- Reduction in bit wear equals fewer trips and better ROP throughout interval
- Data includes all target zones with the exception of 3 exploration wells

Field Record 12-1/4" Run – Differential Pressure



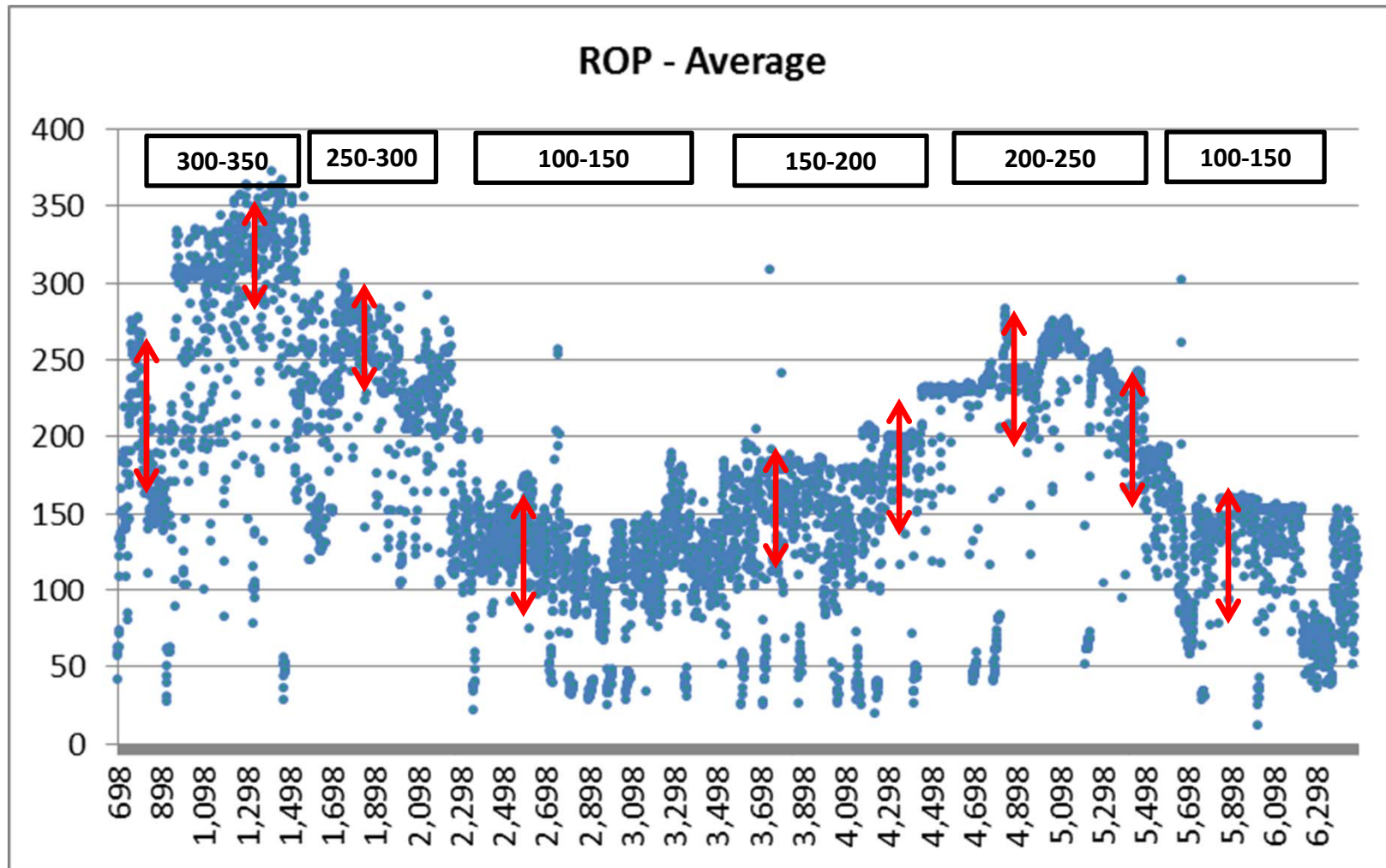
- Rig drilling with a focus on differential pressure
- 9-5/8" x 8" hybrid motor is rated to 1,000 psi. Don't be afraid to use it. We have had very few, if any, motor failures in this interval
- Harder rock needs more differential pressure to keep the bit engaged

Field Record 12-1/4" Run – Bit Weight



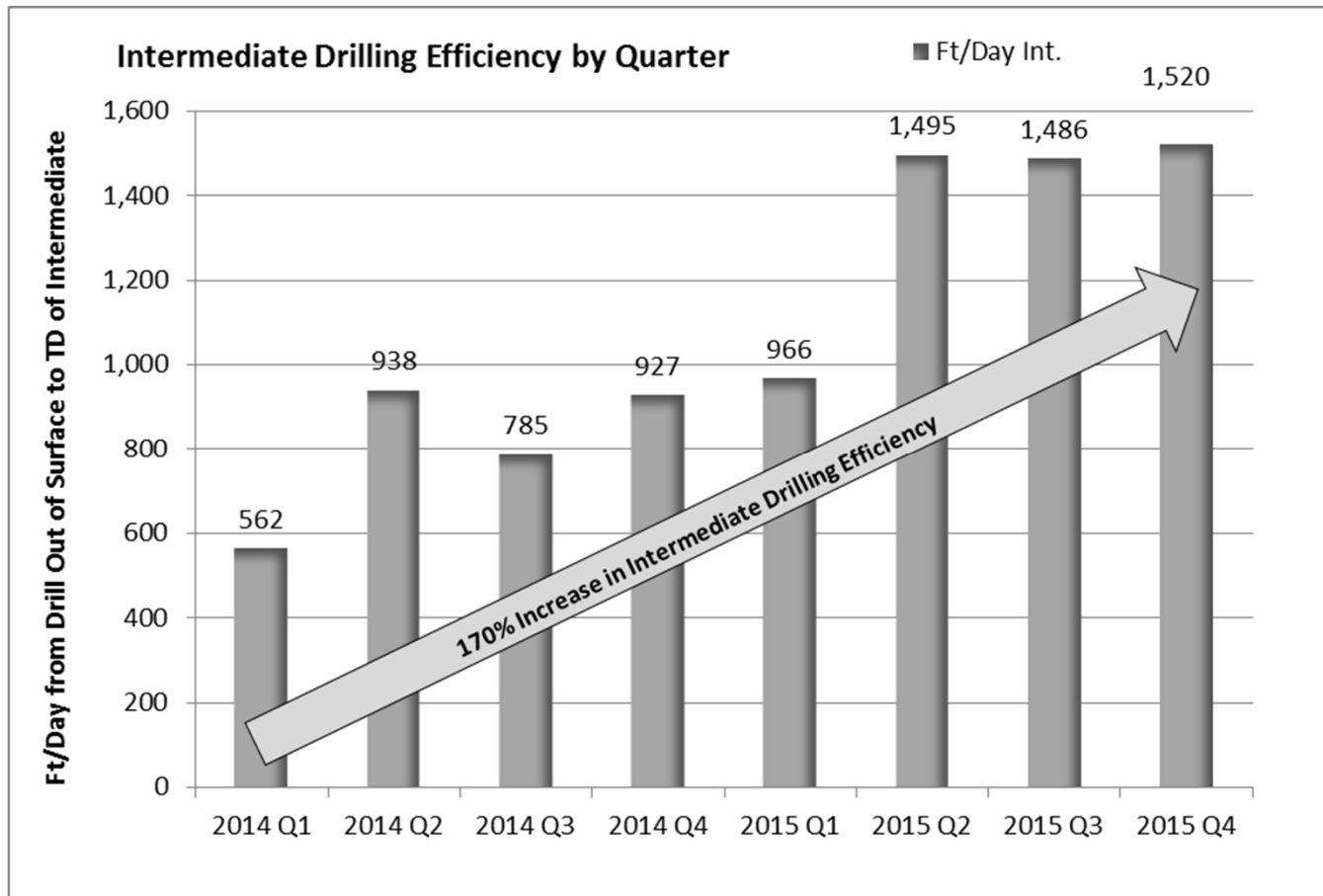
- The rock types and rock hardness (compressive strength) changes dramatically through this section. Because of this, we have to ignore WOB and drill off of differential pressure
- The harder the rock, the more WOB to achieve the same differential pressure
- 12-1/4" 7 blade PDC bit is rated to 60k...on this run they successfully used all of the rating without damaging the bit (graded 1-1)
- Avoid "slamming" weight on the bit by controlling ROP setting with auto-driller. Setting needs to be just above actual ROP that the rock is giving you. You have to constantly "chase" the ROP.

Field Record 12-1/4" Run – ROP



- They were getting 300 fph instantaneous until harder rock was encountered at 2,300' (also started 400' step out at 2,700')
- The dramatic changes in rock compressive strength are clear when looking at the ROP curve
- Important to ignore WOB (within bit rating) and focus on differential pressure
- Avoid "slamming" weight on the bit by controlling ROP setting with auto-driller. Setting needs to be just above actual ROP that the rock is giving you. You have to constantly "chase" the ROP.

12 ¼” Intermediate Drilling Efficiency Almost Tripled



Fleet Record:
 Ensign 774
 Holt C132-133 #4SM
2,961 ft/day
6,144' in 2.03 days

- 170% improvement in 12-1/4” efficiency since 2014 is equivalent to cutting 7.4 days from an average 12-1/4” interval
- Ft/Day is total footage from drill out of surface casing to interval TD divided by total days including trips (includes all Hz wells)
- Performance drivers include:
 - Focus on data analysis to identify best practices, top performing rigs, and top performing drilling foreman
 - Optimized drilling parameters: maintaining aggressive and constant differential pressure to reduce bit wear caused by vibrations and impact damage
 - New directional vendor with high performance hybrid mud motor (8” power section x 9-5/8” bearing section)
 - Optimized bit, stabilizer, and drill collar design
 - Increase in percentage of wells targeting UWC/MWC formations

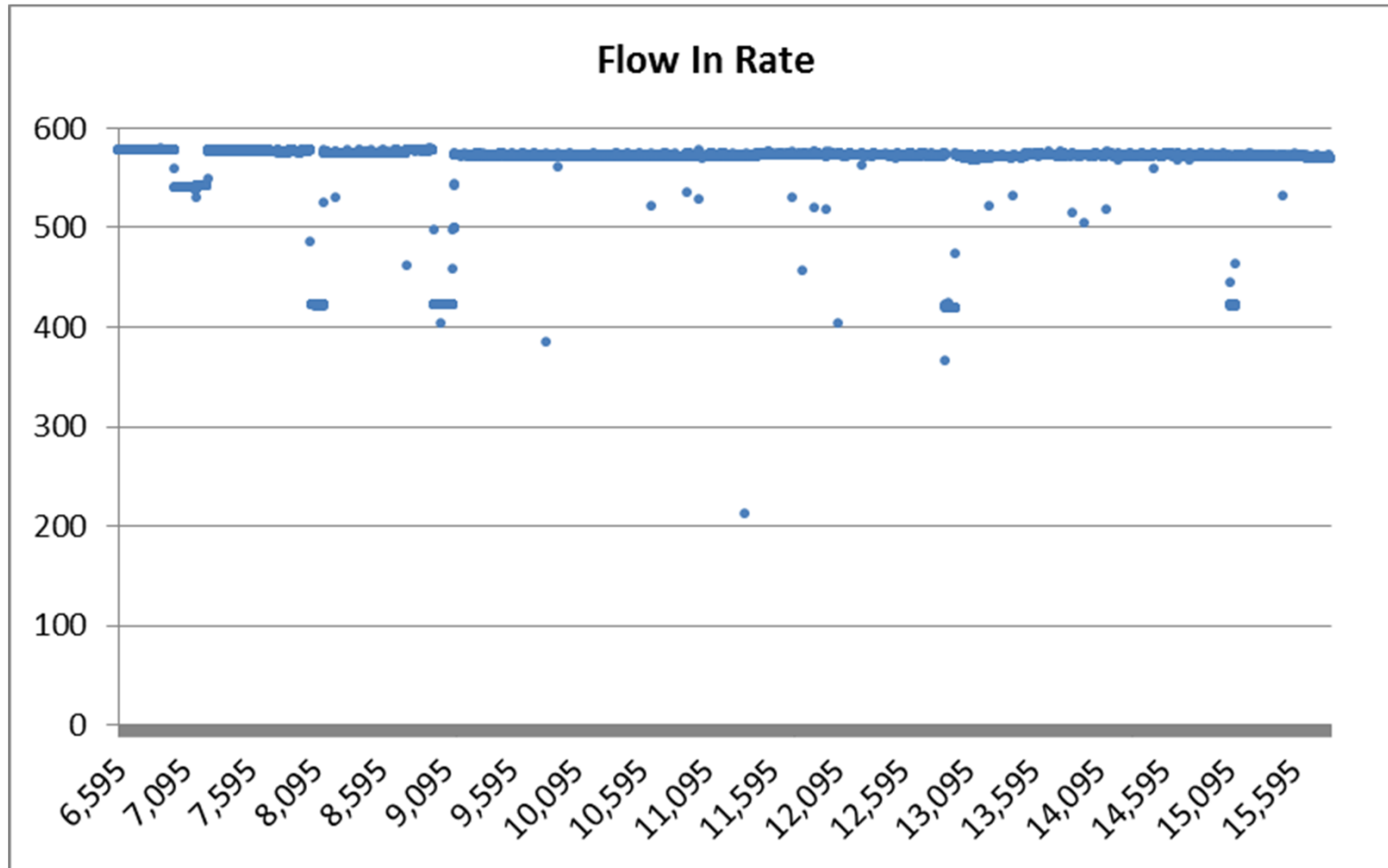
Sweet Fruit: It's a Buyers Market for 7,500 psi rigs



Rig Yard in Midland on 10/6/15

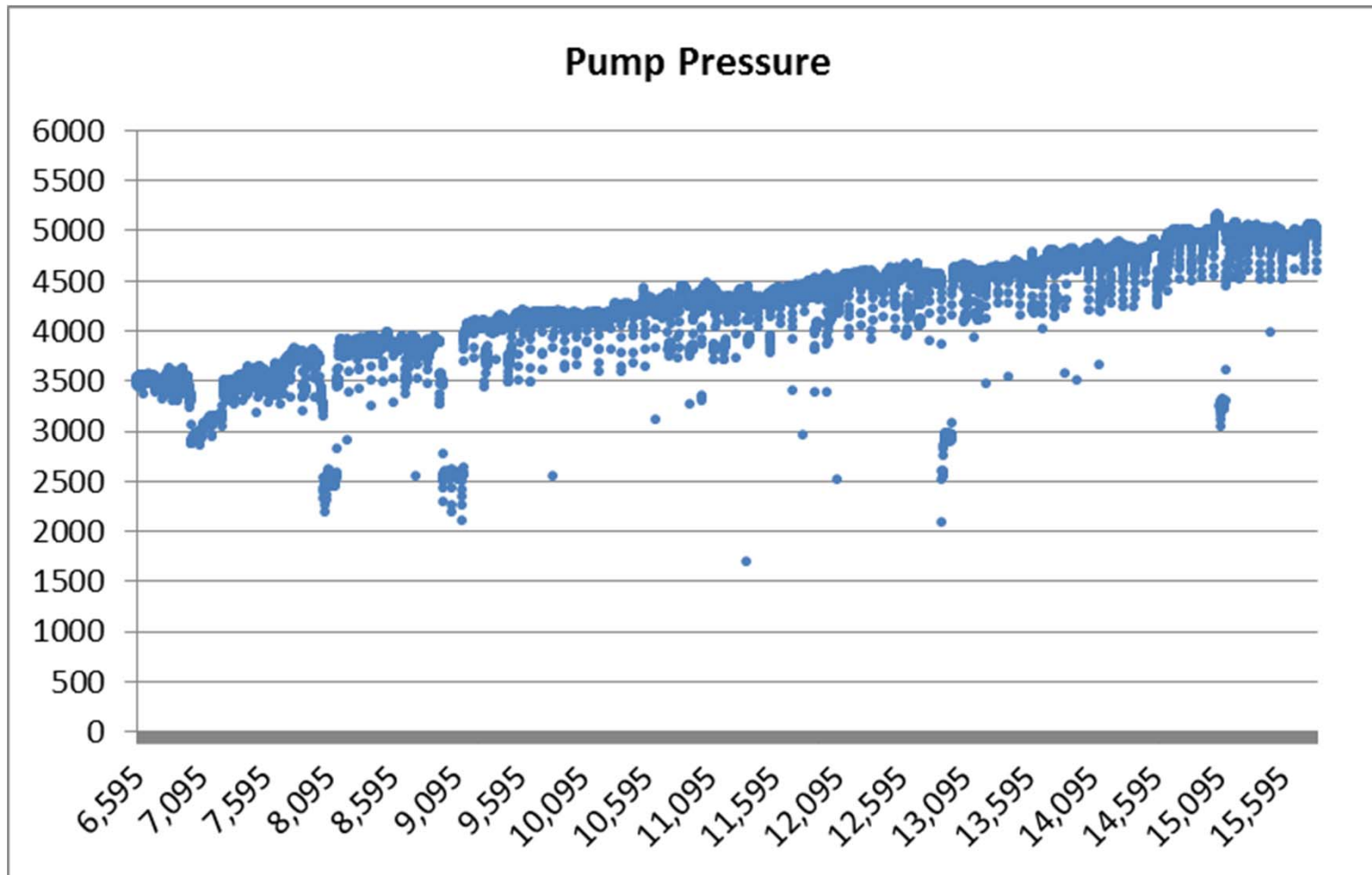
- **7,500 psi Rated Rig provides optimal hydraulics for long laterals and deeper targets**
- **Let's look at two examples: Field Record Runs for 7,500 psi vs. 5,000 psi rig**

7,500 psi Rig Flow Rate in Wolfcamp Production Hole



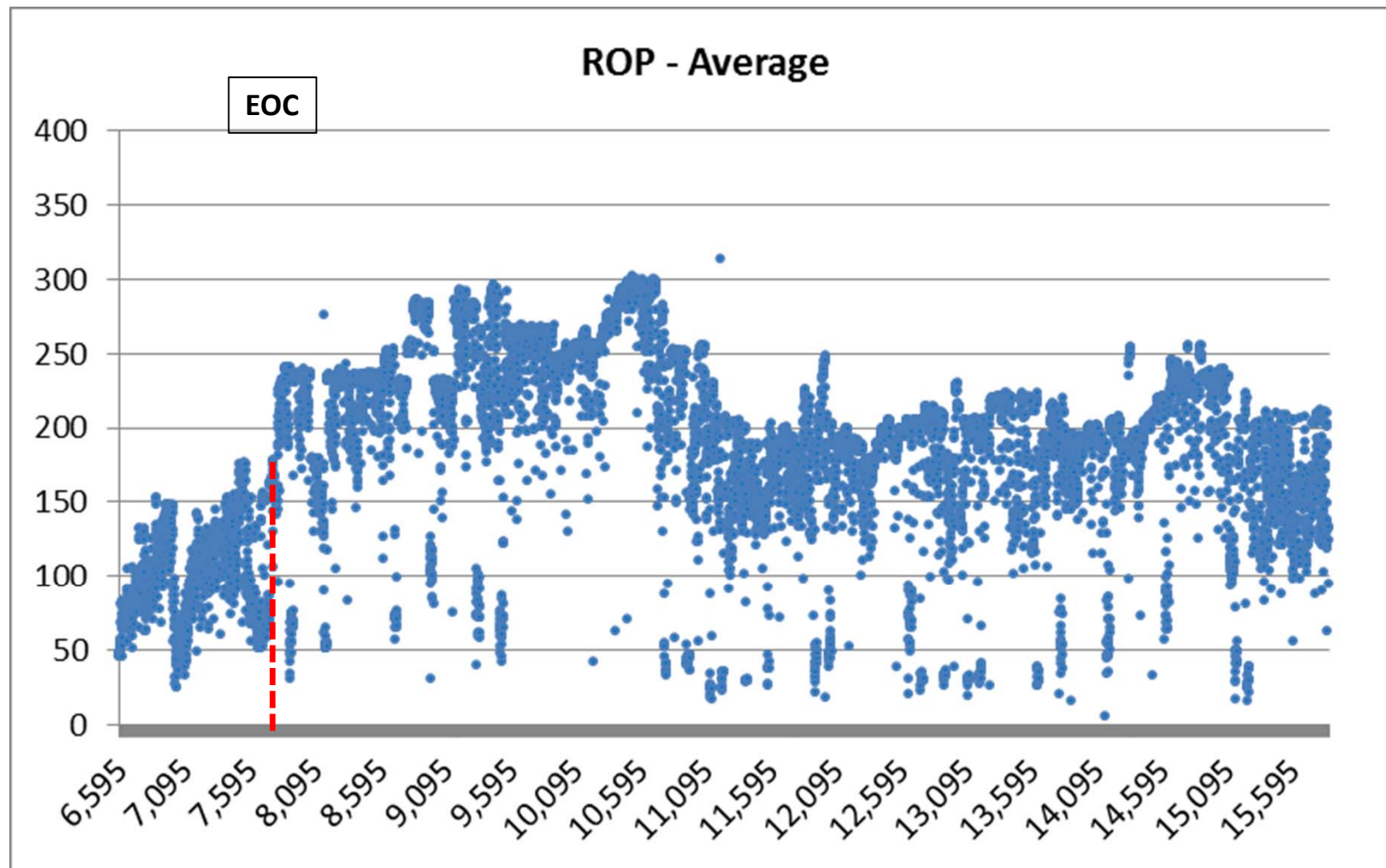
- 577 gpm maintained throughout interval (not pressure limited)
- Higher flowrate = better hole cleaning

7,500 psi Rig Pump Pressure in Wolfcamp Production Hole



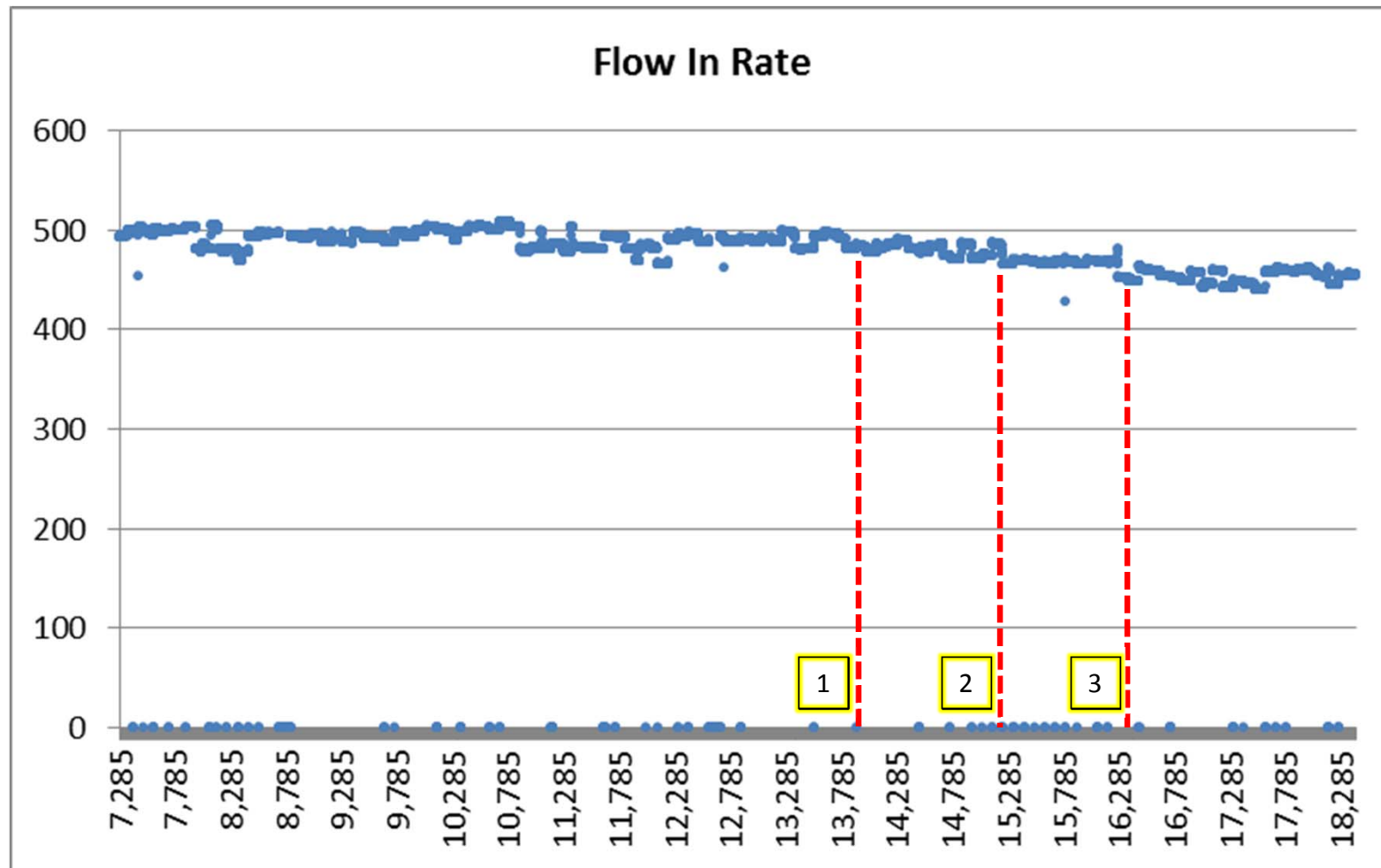
- 7,500 psi rig with 6" liners is rated to 5648 psi at 85%
- Pressure maxes out at 5,200 psi. Rig is not pressure limited; increase in pressure correlates with depth

7,500 psi Rig ROP in Wolfcamp Production Hole



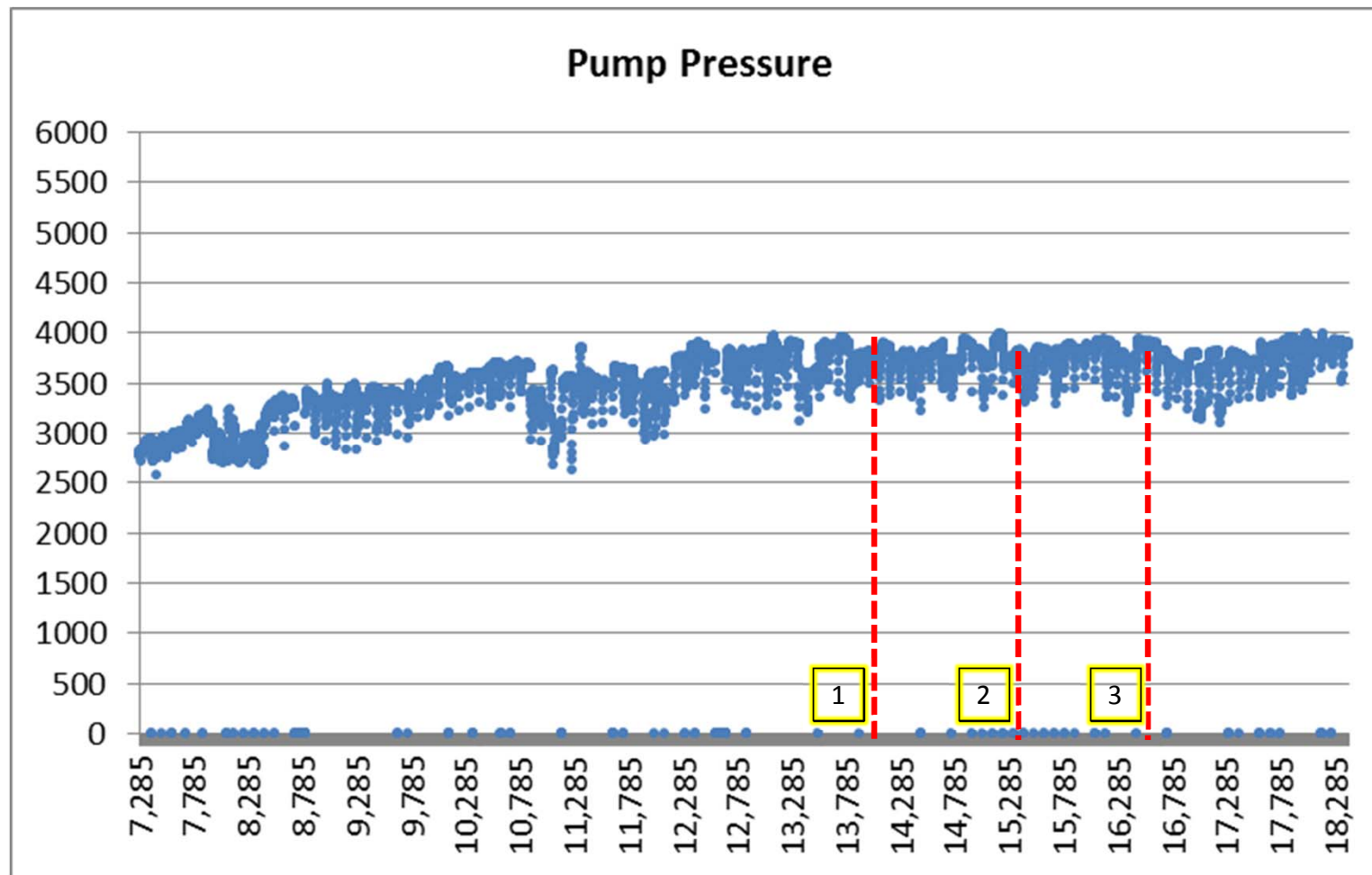
- 150-300 fph instantaneous throughout lateral interval
- Rig not pressure limited; ROP and differential pressure correlates with formation changes
- 7,500 psi record: 9,278' in 4.1 days for an average of 2,286 ft/day from Kick Off Point to TD

5,000 psi Rig Flow Rate in Wolfcamp Production Hole



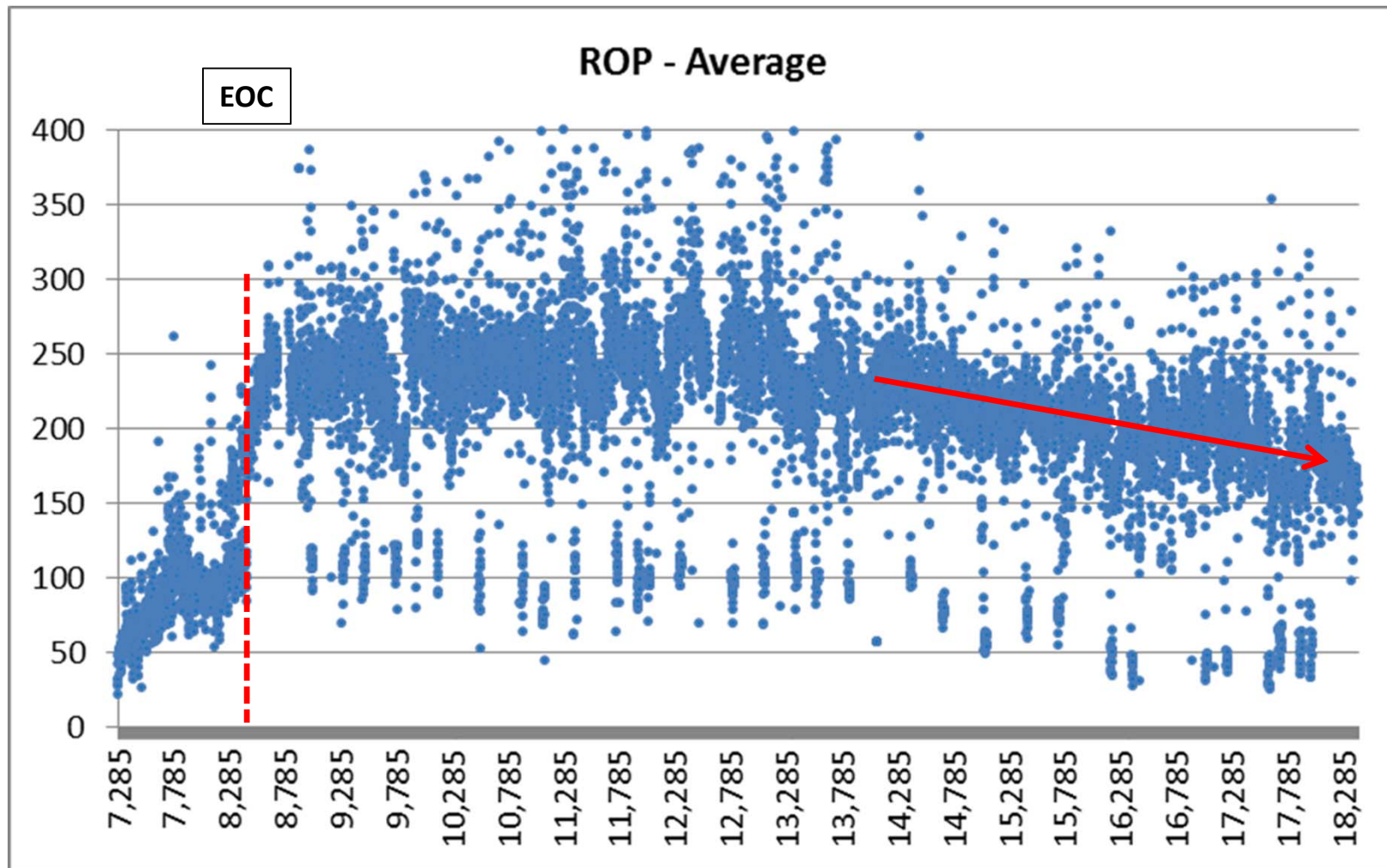
- 5,000 psi rig is pressure limited (85% of rating = 4,250 psi as per contract)
1. Flowrate reduced from 500 to 480 gpm at 13,800' MD
 2. Flowrate reduced to 470 gpm at 15,300' MD
 3. Flowrate reduced to 450-460 gpm at 16,300' MD (80% of Flowrate at TD on 7,500 psi rig)

5,000 psi Rig Pump Pressure in Wolfcamp Production Hole



- 5,000 psi rig is pressure limited (85% of rating = 4,250 psi as per contract)
- 1. Flowrate reduced to 480 gpm at 13,800' MD
- 2. Flowrate reduced to 470 gpm at 15,300' MD
- 3. Flowrate reduced to 450-460 gpm at 16,300' MD (80% of Flowrate at TD on 7,500 psi rig)
- Pressure limited = reduced flowrate = less than optimal hole cleaning

5,000 psi Rig ROP in Wolfcamp Production Hole



- 200-300 fph instantaneous throughout interval. Reduction in ROP corresponds with reduction in flowrate and differential pressure
- 5,000 psi rig record: 11,131' in 4.2 days for an average of 2,658 ft/day from Kick Off Point to TD
- This well drilled faster than the 7,500 psi record but it **took 2 extra days to W&R casing to TD (hole cleaning likely a factor)**
- The two wells compared are different targets and ± 10 miles apart. All things being equal, the higher flowrate, higher SPP rating, and higher differential pressure limit of the 7,500 psi rig will equate to more efficient drilling, especially with deeper targets ²²

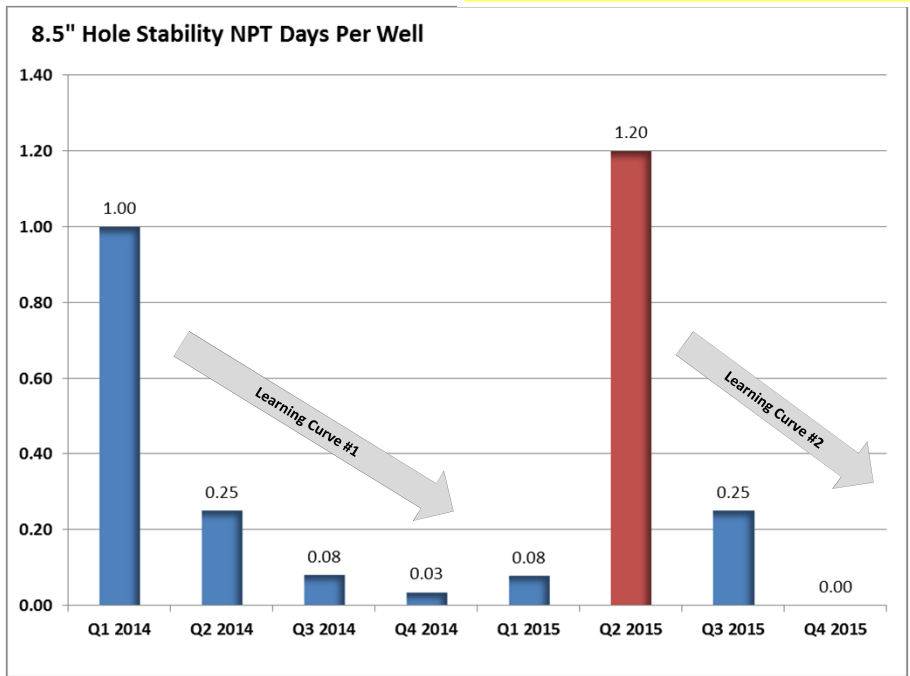
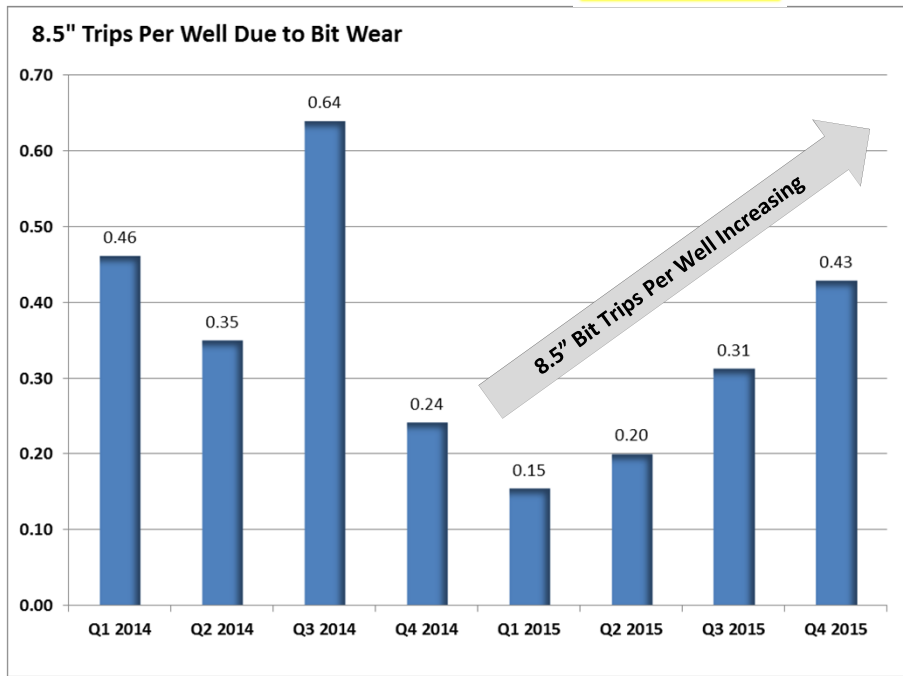
Ground Fruit (Bittersweet): Earth Model Targets Offer New Challenges for Drilling Dept.

Earth Model Targets Introduced

Earth Model Fully Implemented

Hole Cleaning Best Practices Implemented

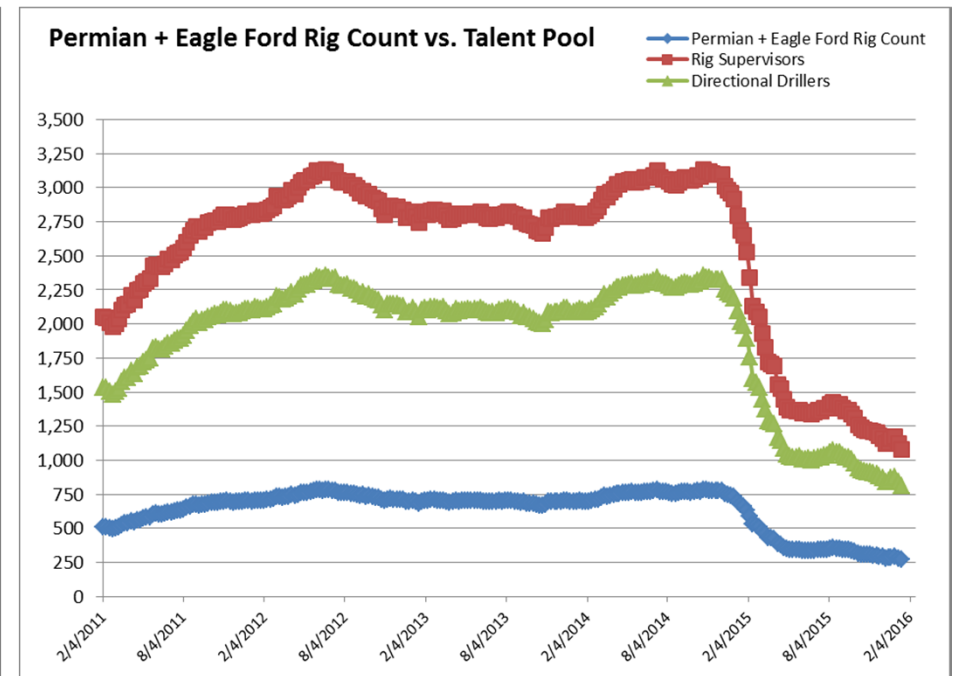
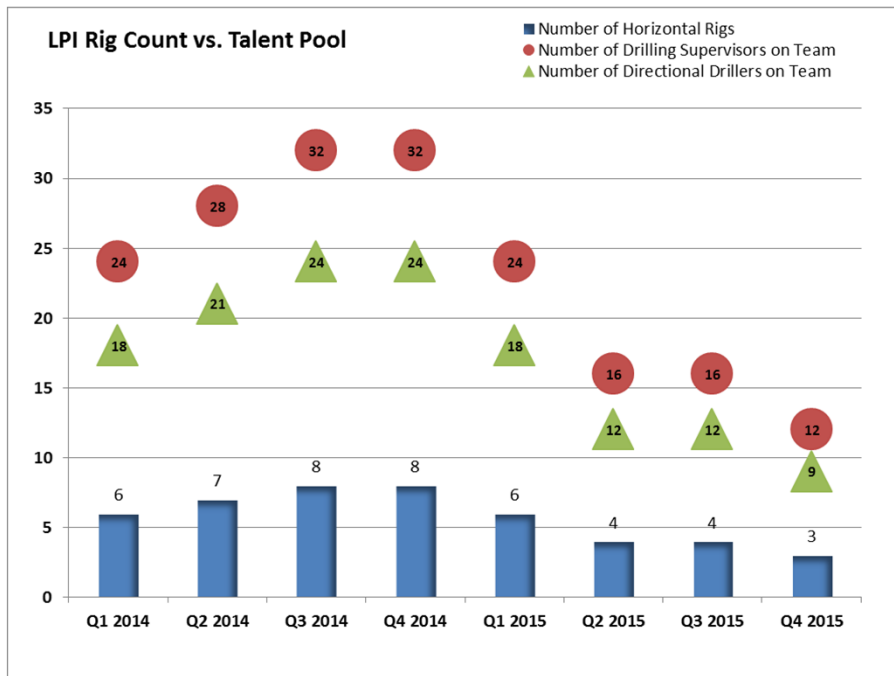
What The Heck Happened?
New Targets = New Learning Curve



- Earth Model Targets tend to have a higher limestone content vs. traditional targets which has led to an increase in bit wear
- Some new targets require higher mud weights vs. traditional targets which had to be learned through experience

Earth Model Targets Improve Well Productivity/Economics but offer new challenges for Drilling Department

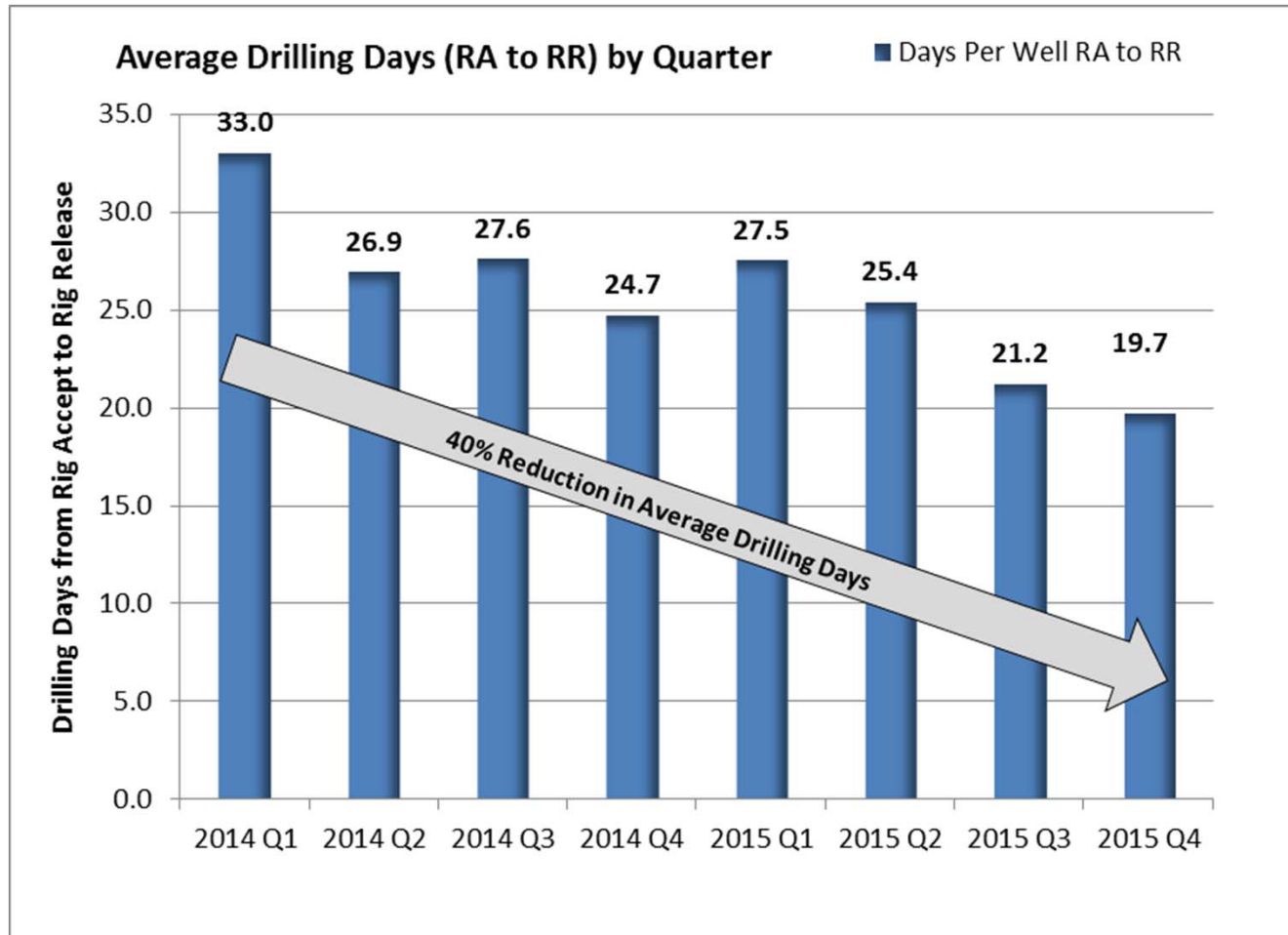
Ground Fruit (Bittersweet): Reduced Rig Count Allows High Grading of Field Personnel



- At current Laredo 3 rig count, we are left with the best of our 3rd party talent (Rig Foremen, Directional Drillers, Mud Engineers, etc.)
- The current combined Permian/Eagle Ford rig count of 270 is 34% of max 784 in June of 2012
- The high grading of personnel is a driver of performance and contributes to the resilience of productivity observed in the industry
- You must continue to engage the team on lessons learned, and best practices with a focus on continuous improvement

Performance Optimization is a people-driven business!

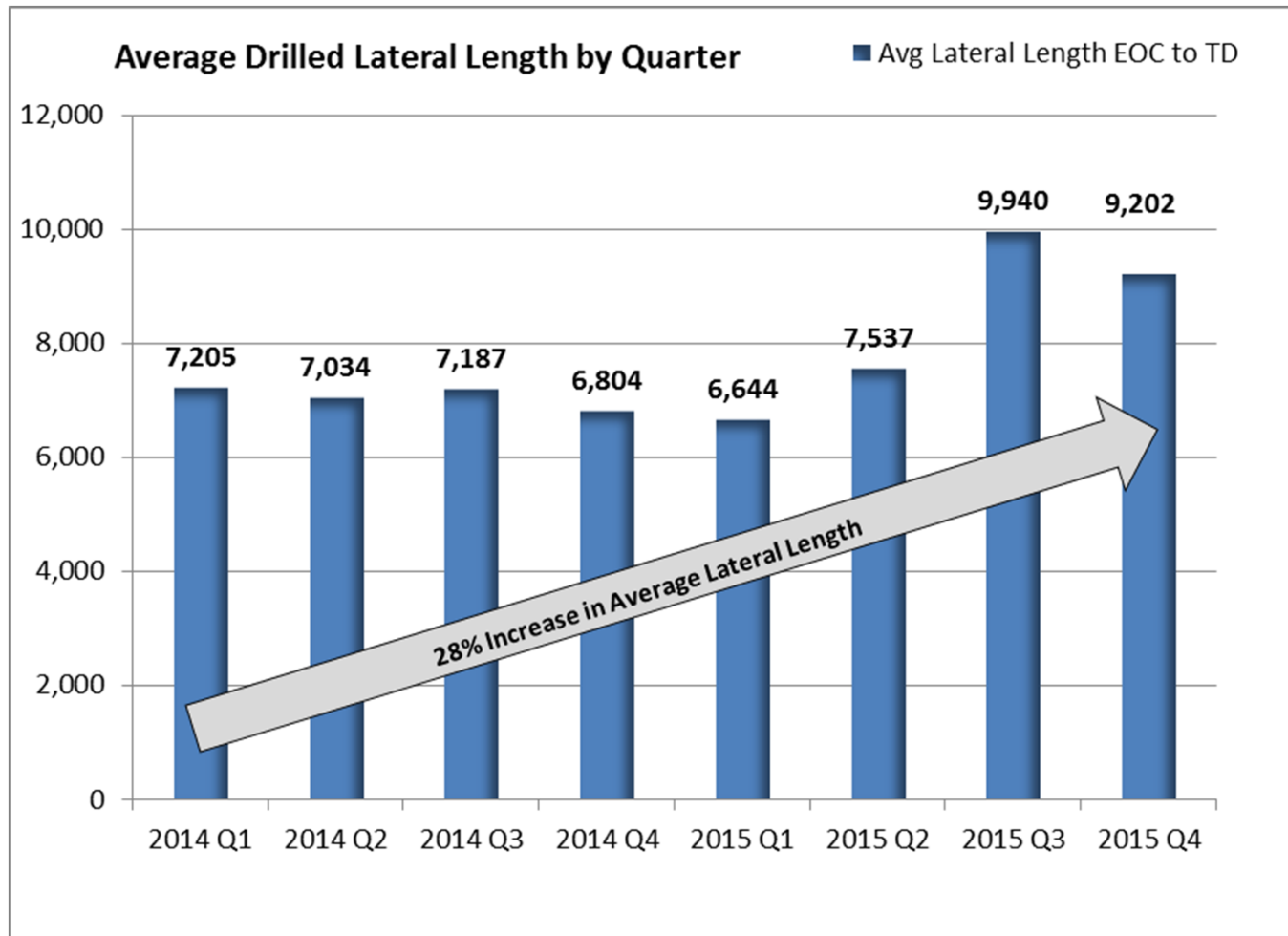
Average Drilling Days per Well



Fleet Record:
 Ensign 773
 Barbee C1-1 1RU
15,171' in 12.2 days
 Rig Accept to RR

- 13.3 days or 40% reduction since 2014 while also increasing average lateral length by 28% (see next slide)
- Drilling Days are Days from Rig Accept to Rig Release and includes all Horizontal wells (surface casing is pre-set by a turnkey spudder rig for efficiency)
- Improvements in 2H 2015 are driven by a combination of the following factors:
 - Significant improvement in drilling performance in both hole sections (12-1/4" intermediate and 8-1/2" curve/lateral)
 - No "problem wells" rig released in the last two quarters
 - Significant increase in use of multi-well pads and increase in percentage of wells targeting UWC/MWC

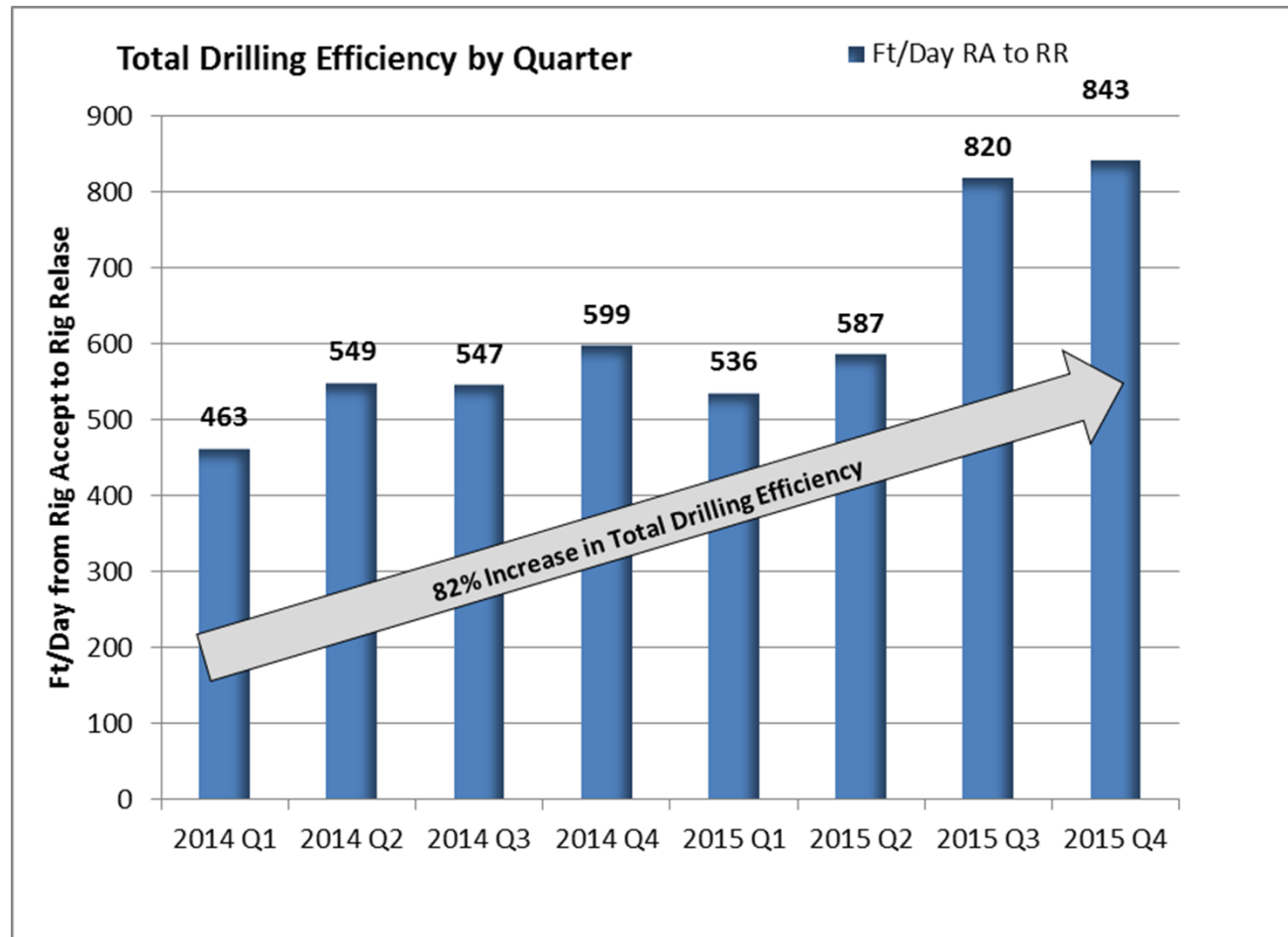
Average Drilled Lateral Length



Fleet Record:
Ensign 773
SRH E 7-8 #1SM
10,492'

- 13.3 days or 40% reduction in drilling days since 2014 while increasing average lateral length by 28%
- Drilled lateral length is distance drilled from end of curve to total depth (completed lateral length is longer)

Fleet Drilling Efficiency



Fleet Record:
 Ensign 773
 Barbee C1-1 1RU
1,241 ft/day
15,171' in 12.2 days
 Rig Accept to RR

- 82% improvement in ft/day since 2014 is the equivalent of cutting approximately 15 drilling days from an average well
- Ft/Day is Footage Drilled from Surface Casing Point to TD divided by Days Rig Accept to Rig Release and includes all Horizontal wells (surface casing is pre-set by a turnkey spudder rig for efficiency)
- Improvements in 2H 2015 are driven by a combination of the following factors:
 - Significant improvement in drilling performance in both hole sections (12-1/4" intermediate and 8-1/2" curve/lateral)
 - No "problem wells" rig released in the last two quarters
 - Significant increase in use of multi-well pads and increase in percentage of wells targeting UWC/MWC

“Grit is perseverance and passion for long-term goals. Grit is taught through a growth mindset, and for teams that have it, it can qualify as a huge advantage...you are either growing or getting old.”

Jeff Banister, Manager of the Texas Rangers

The Midland Basin Learning Tree

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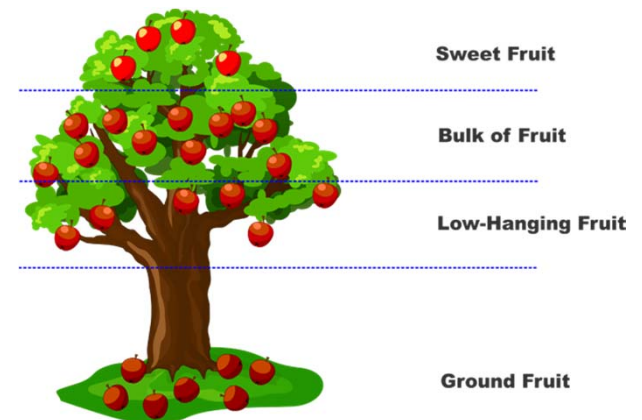
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Backup Slides

May 13, 2015 Northeast Reagan County



Author with rig crew on Ensign 773 in Oct 2015

Midland Basin Wildlife





Author's great-grandfather, also a driller, pictured 3rd from left on bottom in 1920



Author with rig crew on Ensign 151 in April 2015

Project Background

Midland Basin

SE Glasscock and NE Reagan Counties

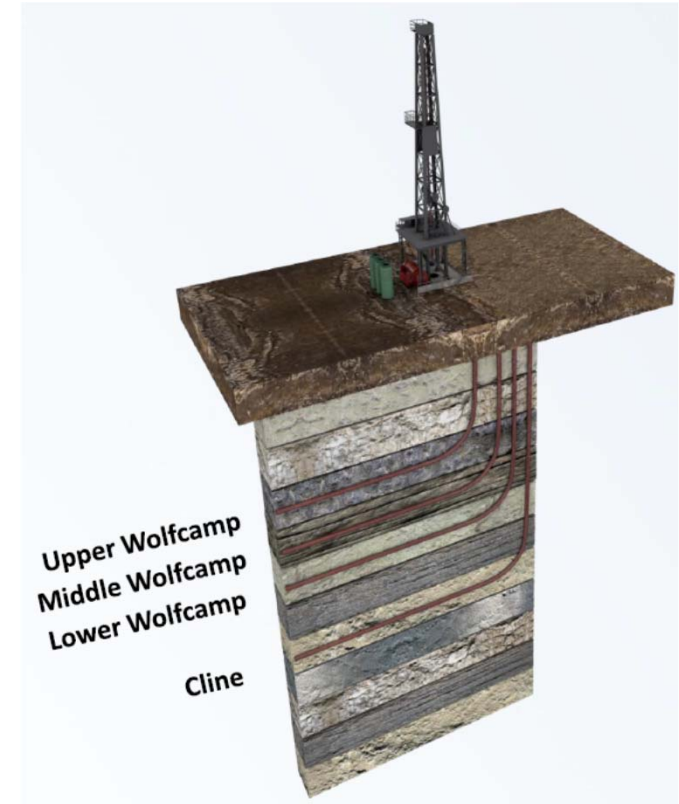
3 String Well Design: 13-3/8" x 9-5/8" x 5-1/2"

4 key performance metrics for normalizing drilling efficiency

- Spud to RR Ft/Day = Total Measured Depth divided by Total Days from Spud to RR
- Cost/Ft = Total Drilling Cost divided by Total Measured Depth
- 12-1/4" Intermediate Section Ft/Day = Interval Footage divided by Total Days from Drill Out to TD
- 8-1/2" Curve/Lateral Ft/Day = Interval Footage divided by Total Days from KOP to TD

'RA to RR' data is days from start of NU BOPs to drill 12-1/4" section to rig release

- Due to turnkey pre-set of surface casing by spudder rig for efficiency
- To compare to rig data that includes surface, add 2 days
- To compare to other well data that includes rig moves, add 4 days



← 11,400' Vertical Section

Maintaining Drilling Performance in a Downturn

Our goal is to deliver wells with best-in-class drilling performance

It is even more critical to maintain good capital efficiency in a \$30 oil market

When the rig count goes down, the tendency is to cut staff drastically in response

When Drilling Engineers are assigned to too many rigs, they do not have enough time for detailed analysis of data and best practices to accomplish best-in-class performance

Critical to maintain dedicated resources that are focused on optimization, best practices, and performance

The cost benefit to the focus on data analysis far outweighs the cost of an engineer

Potential options to maintain a focus on performance include:

- 1. Reallocate engineers to Performance Engineer position**
- 2. Put “surplus” engineers to work as Drilling Foremen (when the interest is mutual)**
- 3. Consider rotational schedule for office Drilling Engineers to improve efficiency**

“New School” Leadership and Reporting

Old-school foreman mentality towards reporting and sharing of information must be addressed

- “the more I tell the office, the more explaining I have to do”
- “sometimes the less they know, the better”
- “I don’t want to share all my secrets or my competitive edge”

Build trust and emphasize the importance of reporting critical information to accelerate learning and to prepare for future offset drilling

- Engineers and managers should be able to read the drilling report and know all important information about hole conditions, hazards, equipment problems, etc., without even picking up the phone
- Better reports actually equates to fewer phone calls and questions from engineer
- Information about hole conditions will be critical to planning and executing future offset wells
- Document best practices to lead the way for other rigs
- Our foremen “bought-in” very quickly after time was taken to explain reasoning and after leading by example
- Reports and knowledge sharing have improved dramatically

Recommended Rig Specs for 10k Wolfcamp Lateral on MWP

X-Y walking capability with at least 100' of reach to drill a 4-well multi-well pad (MWP) on 25' spacing

7500 psi standpipe with 6" liners (ex. 5650 psi working pressure at 85% on Gardner Denver 2000 PXL)

Over-designed air condition system for VFD house to handle extreme temps and heavy power load

(10) 8" DC w/ NC56 connections (in addition to 6" DC and 5" HWDP)

Range 3 drill pipe with monkey board height designed accordingly (R3 stands are 3-4' shorter than R2)

Minimum of (3) top-tier shale shakers (new or recently rebuilt)

3 steel tank mud system: 2 for active system, 1 for pre-mixing ops to allow displacement to WBM in 12-1/4" section

Trip tank with min of 75 bbl capacity and centrifugal pump system to allow circulation across BOPs

Drillpipe oscillating system for improved sliding ROP once greater than 5000' VS

Gas separator incorporated into substructure to enable efficient walking operations

Dual-fuel capable generators to allow use of natural gas including gas detection system installed in generator house

Flowline configuration to allow direct path for 10" PVC overboard line to reserve pit (drop flowline into top of possum belly)*

Multi-bowl wellhead system to allow 9-5/8" to be landed without breaking BOPs*

BOP quick-connect system for more efficient NU/ND of BOPs on a multi-well pad*

*Not rig contractor equipment but noteworthy

12-1/4" Intermediate Drilling Best Practices

1. Reduce impact damage by keeping PDC bit engaged on bottom by maintaining constant differential pressure of 400-800 psi. Auto-driller settings are paramount and must be calibrated for each rig.
2. 716 PDC bit with 11-3/4" stabilizers above and below 7/8 lobe, 0.3 rpg, 1.83° motor
3. Run (3) Stds of 8" NC56 DC and (3) Stds of 5" HWDP (No 6" DC)
 - In accordance with API RP 7G which recommends $BSR \leq 2.75$
 - NC56 connection has 12 times the box fatigue life vs. 6-5/8" Reg (See SPE 87197, Ellis, Reynolds, Lee)
4. Do not back off of differential pressure at top of San Andres or other harder formations. This will encourage vibration and whirl and will actually lead to impact damage to PDC cutters.
 - In accordance with Fred Dupriest Exxon Mobile Presentation
5. Where possible, minimize sliding if anti-collision requirements are met
6. Displace brine to gel WBM system with $visc = 40-45 \text{ sec/qt}$ at $\pm 4000'$ and dump and dilute to not exceed 9.1 ppg (frac gradient is 9.4 ppg). Pump 20 bbl sweeps every stand until 5500' and then every other stand. Add polymers on the fly to target min $visc$ of 35 sec/qt when drilling and 45-60 $visc$ at TD.
7. Use of Oil Based Mud (OBM) in Intermediate section may lead to faster drilling time and easier hole conditions but the total fluid management cost is \$400,000 more per well more on average vs. WBM
8. Avoid "slamming" weight on the bit by controlling ROP setting with auto-driller. Setting needs to be just above actual ROP that the rock is giving you. You have to constantly "chase" the ROP

9-5/8" Casing & Cementing Best Practices

1. Place DV Tool and External Casing Packer 200' above top of Clear Fork formation
2. Circulate BU with cement unit, then swap to rig pumps and circulate for 4 hours between stages to allow Stage 1 cement to set up in case the packer doesn't fully isolate weak zones below
3. Plan minimum cement slurry density and height to meet RRC requirements to reduce the chances of lost returns
 - Stage 1: 500' of 13.2 ppg H-plus tail, 11.9 ppg 50/50 H-Poz (10% excess)
 - Stage 2: 300' of 13.5 ppg C (100% excess), 11.9 ppg 50/50 C-Poz (250% excess)
 - Understand cost/bbl of lead cement and compare to spread rate cost to run temp log. Break even point is circulating and dumping roughly 200 bbls of cement to surface (don't be afraid to pump high excess on stage 2 lead)
4. Do not over-displace any portion of shoe tract. Not much downside to having to drill out a little extra cement (different for production casing)
5. For this geographical area, in this data set, we have been 100% successful in achieving required shoe integrity for all target zones when placing the 9-5/8" shoe 60' above KOP with the curve planned on 8°/100' build rates.
6. If insufficient cement top is achieved, and temp log is inconclusive, run Ultrasonic Inspection Log to determine top of cement. The lightweight lead cement often doesn't show up on a traditional bond log but is visible on the USIT log.
7. Install rotating head rubber after drilling out 9-5/8" shoe tract and circulating out plug debris.

8-1/2" Curve/Lateral Best Practices

1. Where possible, utilize short bit-to-bend (4.2' to 4.5') 1.83° motors and 516 PDC bits that are efficient in both the curve and lateral which allows for one-run BHA strategy
2. Utilize 7/8 Lobe, 0.3 rev/gal slow speed motors in all zones. This allows you to run optimal topdrive rpms for hole cleaning (70-90) while reducing revs at the bit to prolong bit life (shoulder wear) in harder formations.
3. Utilize K&M drilling parameters (70- 90 RPMs) in the lateral for optimal hole cleaning and ROP
4. Target 450 – 650 differential pressure when rotating in the lateral
5. Weight up to max expected mud weight by 60° in the curve to avoid instability
6. Plan curves on 8° /100 to avoid cost of ± \$180,000 2-trip scenario for insufficient build rates
7. Always know your lowest landing limit and your DL needed to land at the limit prior to tripping for a higher bend motor
8. Perform Formation Integrity Test after drilling out 9-5/8" shoe to confirm integrity of primary cement job and to confirm ability to achieve the mud weight required to drill the planned landing point
9. Prior to spending > \$30,000 to pull rods and run a gyro survey in offset vertical wells, determine NPV of existing well, and utilize a risk-based calculation to determine chance of collision and risked cost of collision.

5-1/2" Casing & Cementing Best Practices

1. At TD, circulate at 100 rpms for 1 hour per 1000' of lateral racking back 1 stand after each bottoms up. Spotting beads and planned wiper trips have been proven unnecessary. Rack back 10 stands and start laying down pipe if first 10 pull slick. Adjust as needed for observed hole conditions.
2. Mix cement at maximum practical rates and displace at a minimum of 5-7 bpm to achieve adequate displacement efficiency in lateral interval where casing is laying on low side of hole and mud on low side has the potential to be bypassed.
3. If concerned with lost returns, model hydraulics of cement job, adjust design accordingly, and consider slowing down displacement rate once the cement reaches 30 degrees in the curve (and begins to lift)
4. Utilize a low cost cement scavenger to recover OBM left on the annulus of the production casing.

The True Meaning of Leadership

Author's Note: Jeff Banister was hired before the 2015 season after the Rangers had the worst record in the American League in 2014. In 2015, the Rangers clinched a playoff berth on the last day of the regular season and lost the ALDS to the Toronto Blue Jays in 5 games despite a valiant effort. Banister won manager of the year.

By Jeff Banister, Texas Rangers Manager, essay published on 8/24/15 (paraphrased) <http://espn.go.com/blog/buster-olney/insider/post?id=11034>

Grit is perseverance and passion for long-term goals. Grit is taught through a growth mindset, and for teams that have it, it can qualify as a huge advantage. We see this in the daily celebration of progress.

With the Rangers, our core group of players loves to celebrate the small victories we see each day. Teams with true grit understand that the game is filled with challenges and failure and a long grind of 162-plus games. You know a team has it when each player, 1 through 25, exhibits this quality and each individual goes to another level of fight. Different players will step up on different nights, and the sole focus is on execution and there are no excuses or explanations.

Our best example of grit this season has been through the leadership and resiliency of our team captain (Adrien Beltre). He shows up every day with an unwavering commitment to getting the job done, no matter what. He has a complete commitment to the mission, and doesn't let distractions, the odds or the opponent affect his level of commitment.

I don't have all the answers, but I do know that today's players are more talented than ever, and they have high expectations of their leader. Coaching the 21st century athlete, you can't coach today's game by yesterday's rules. The millennial athlete needs for their leader to be a serving leader who focuses primarily on the growth and well-being of the people and the communities in which they belong. I believe a requisite of service leadership is gratitude.

In our organization, we try to cultivate this daily. Individuals need to experience a sense of appreciation for their contributions and be acknowledged for their efforts to the team. When doing so, it enhances the sense of well-being and goodwill among individuals and groups and creates meaningful relationships among team members.

We believe in the adage that, "you are either growing or getting old." A pursuit is a difficult and long-term mission. The mission you are on must mean something to you, and you have to be committed to not stopping until you figure out a way to get it done. Grit and gratitude are catalysts of successful people, organizations and communities. They are essential winning ingredients to put you into position to achieve your goals, or in our case, win championships.

A few final thoughts on leadership principles we try to live by in the Rangers organization:

1. Leadership today is about authenticity, not authority.
2. You can lead only as far as you grow, and you will grow only as far as you let yourself.
3. Understand your "why." For me, it's to help and develop our team as we strive to be the standard-bearer for a championship organization.

I wish you all the best in your own leadership journey.

2014-15' Record Drought to Record Rainfall



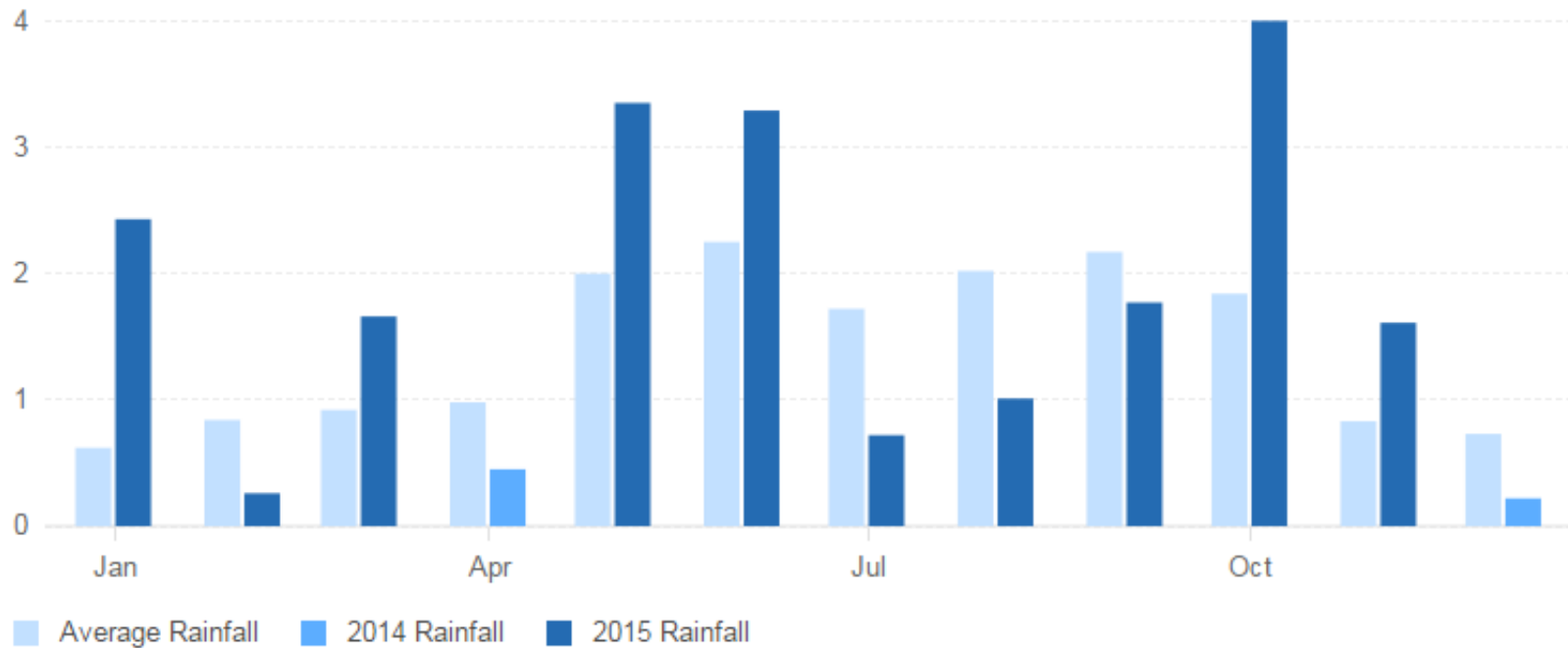
- Midland, TX average annual precipitation = 14.6"
- 2013 = 8.5", 2014 = 7.6" or 55% below average over 2 year period
- 2015 YTD precipitation thru Nov = 20", or 24% above average YTD thru same month.

Midland Rainfall Data

<http://rainfall.weatherdb.com/l/251/Midland-Texas>

http://www.srh.noaa.gov/maf/?n=cli_maf_pcpn_annual

Monthly Rainfall



Monthly Rainfall

[Share](#)

See how total rainfall so far this year compares to average.

