Chesapeake Energy
Eagle Ford Shale Overview

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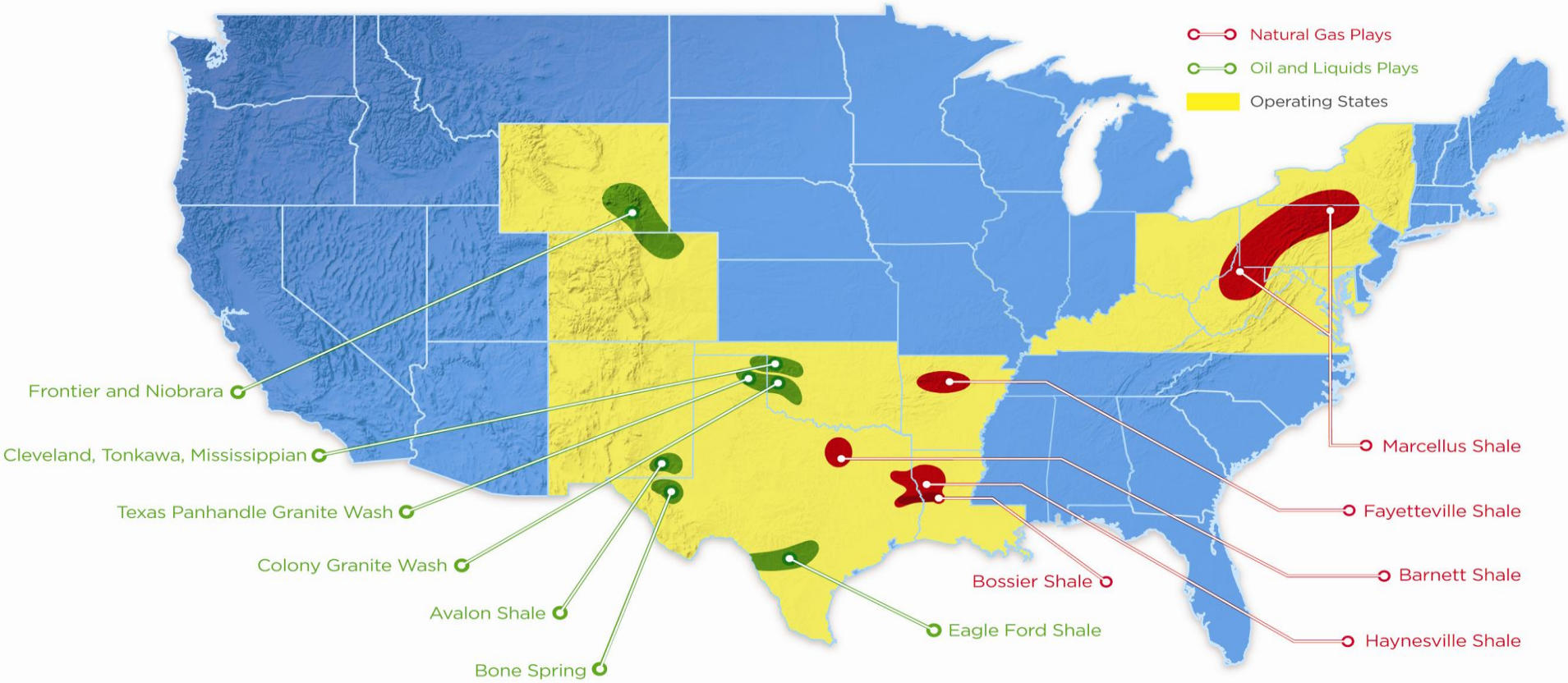
Jason Stidham
Senior Drilling Engineer
South Texas District

Chesapeake– Overview

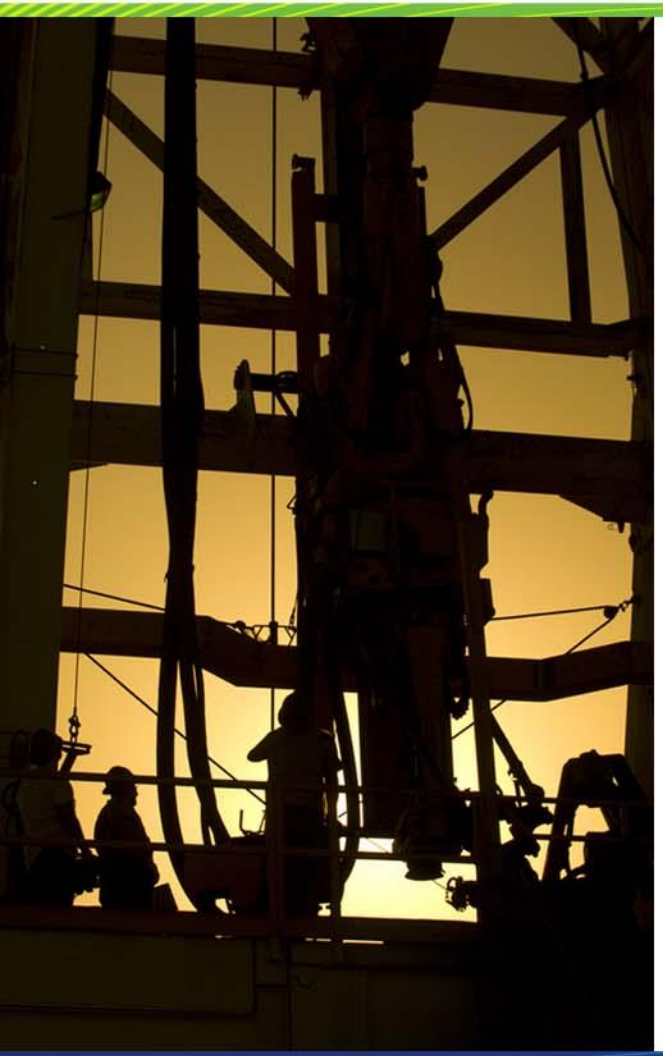
- One of the largest producers of U.S. natural gas
  - 2010 EOY ~2.6 bcfpd
- Committed to increasing liquids production
  - 59.5 MBPD oil and NGLs – 100% more than EOY 2009!
- Most active driller in U.S. – CHK collects 20% of all daily drilling information generated (25% in areas of interest).
  - 155 operated rigs currently, down from peak of 158 in August 2008
  - 175 operated rigs by EOY 2011 and 200 operated rigs by EOY 2012
- Consistent production growth – 21 consecutive years of sequential production growth
  - Realized a 14% increase in 2010 over 2009
- Best assets in the industry
  - 16.9 tcfe of proved reserves EOY 2010
  - Added 4.8 tcfe of proved reserves through the drillbit in 2010

Chesapeake– Operating Areas



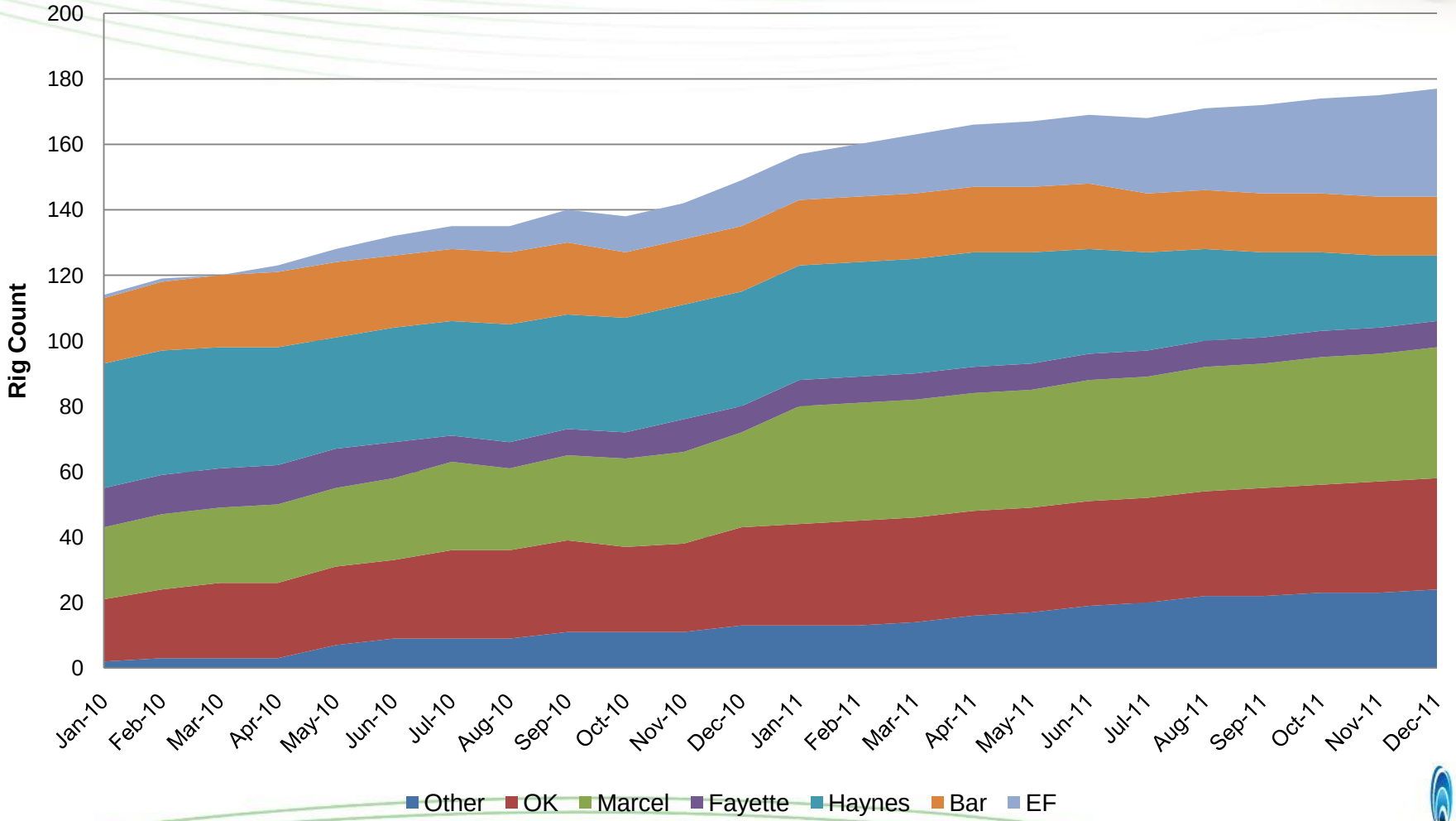
Chesapeake ENERGY

Big Oil on the Way to CHK

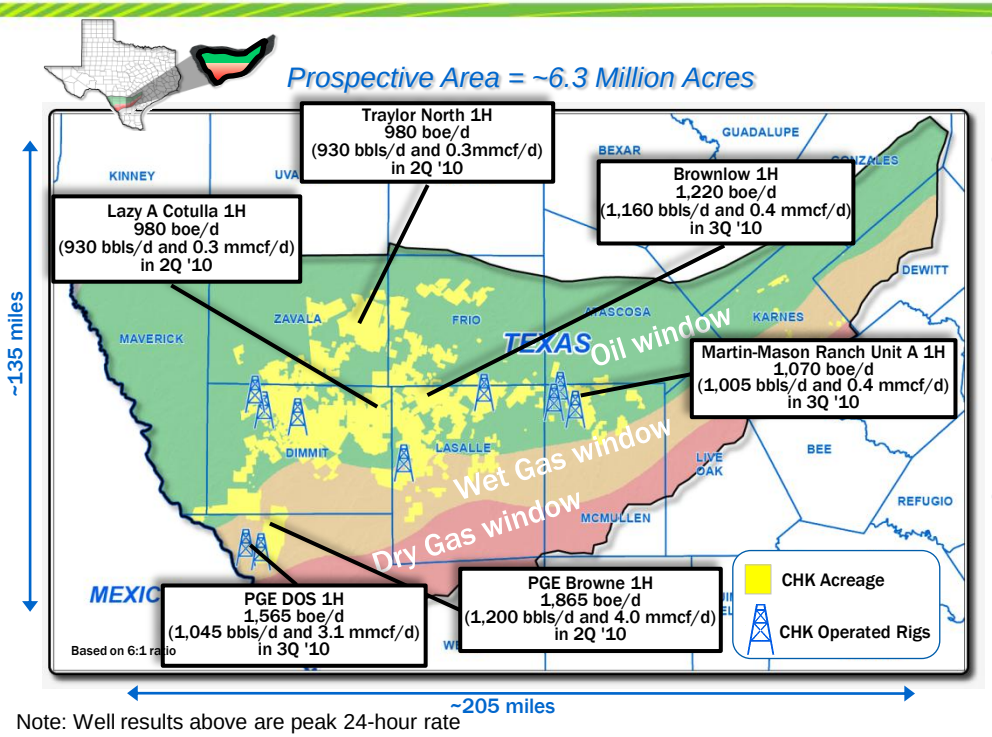


- Started transition in early 2008
  - Announced discovery of Colony Granite Wash play
  - Disclosed new unconventional oil plays
- Quietly built leasehold positions in unconventional plays that would benefit from advances in drilling and completion technologies
  - CHK has many unique advantages vs. competitors
- 2008-2010: confirmed play concepts work
- Now have ~1.9 mm net acres in 12 plays with ~2.0 bboe of risked unproved resources and 6.8 bboe unrisked unproved resources
- Projecting liquid production mix to increase from 10% in 1Q'10 to 15-20% by YE 2012
- Targeting >100,000 bbls/d of oil and natural gas liquids production by YE 2012
- Continuing to evaluate other play concepts

2010-2011 Rig Count



Eagle Ford Shale Overview



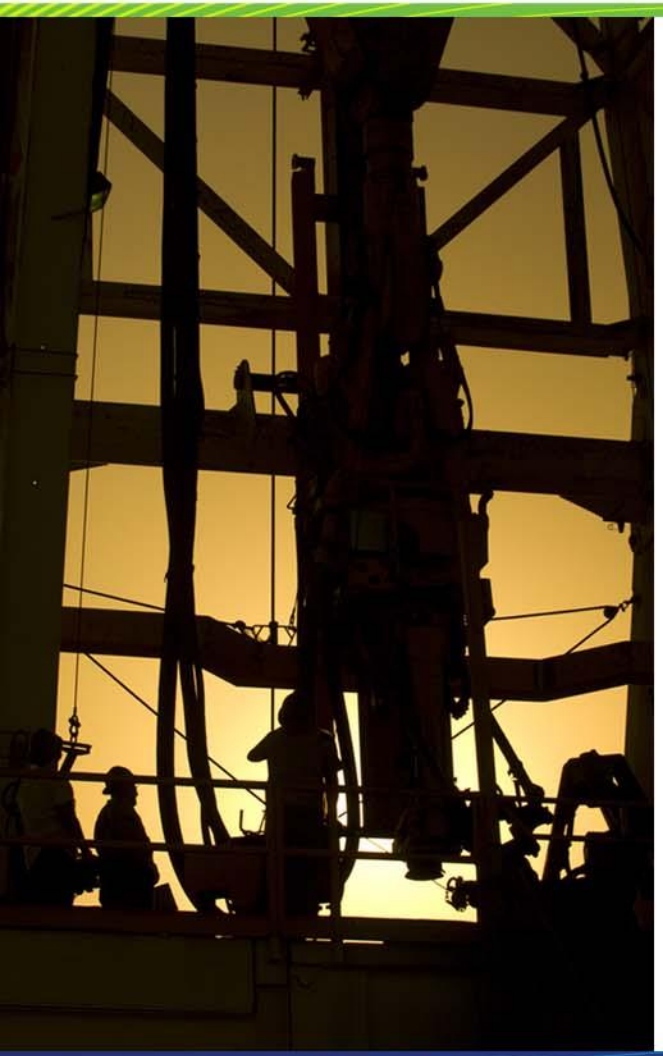
Note: Well results above are peak 24-hour rate

- **World-class liquids-rich play**
  - ~3.5 billion boe unrisked unproved resources net to CHK in the Eagle Ford Shale

- **The Eagle Ford Shale is quickly developing into the most profitable of all shale plays**
- **CHK began leasing in August 2009 and has since captured the largest position in the industry with ~625,000 net acres**
  - Focused leasehold position in oil and wet gas windows and within areas that have optimal mix of permeability and thermal maturity
- **Very attractive rates of return**
  - Relatively shallow formation results in low drilling and completion costs
  - High value production from oil and wet gas
- **Currently have 14 horizontal wells on production**
- **Currently operating 16 rigs in the play and drilled 50 wells in 2010**
- **Plan to exit 2012 with ~40 rigs**
- **New JV with CNOOC**

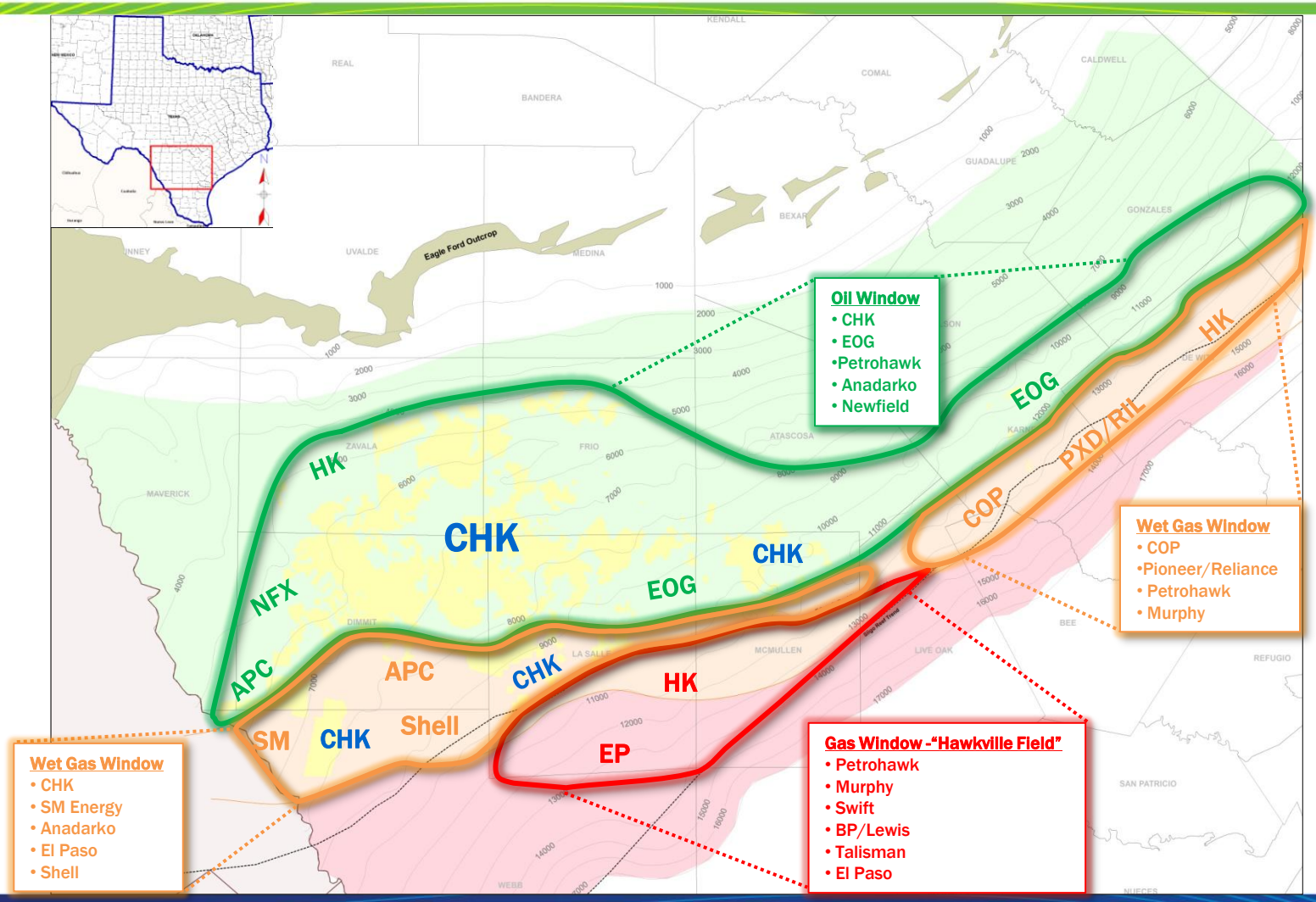
The Eagle Ford will quickly become a key component of CHK's liquids production

Eagle Ford Shale – JV Summary



- **CHK has sold a 33.3% interest in 600,000 net acres in the Eagle Ford Shale to CNOOC International Limited for $2.16 billion or $10,800 per net acre, on a 50/50 cash/carry basis; an additional 25,000 acres to be offered after closing**
- **CNOOC will pay $1.08 billion in cash at closing and will pay an additional $1.08 billion by funding 75% of CHK's share of the drilling and completion expenditures until the $1.08 billion carry obligation has been funded**
  - Closing of the transaction occurred in 4Q '10
  - CHK expects to utilize the drilling carry by YE '12
- **CHK will serve as the operator of the JV and plans to continue acquiring leasehold in the Eagle Ford Shale**
  - CNOOC will have the option to acquire its 33.3% share of the new acreage on mutually attractive terms
  - CNOOC will also have the option to participate with CHK for a 33.3% interest in the development of midstream infrastructure in the Eagle Ford Shale

Eagle Ford Shale Industry Activity

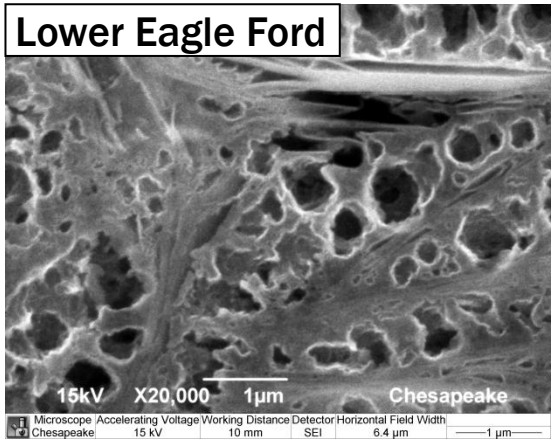


CHK & EOG are the primary players in the oil window

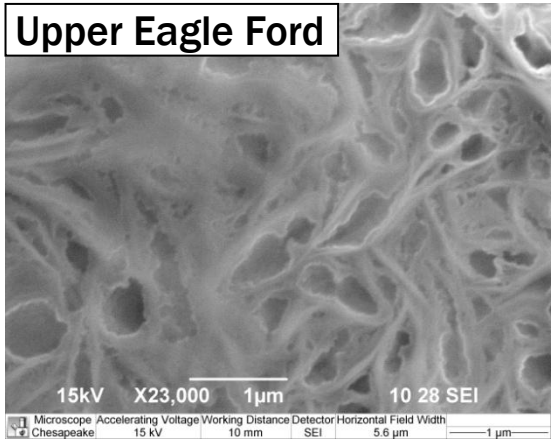
Eagle Ford Shale – Characteristics

Microscopic images from CRTC

Lower Eagle Ford



Upper Eagle Ford



Porosity is distributed between intergranular and intrakerogen

Depth TVD (feet)	5,000 – 11,500
Well total depth (feet)	10,000 – 17,500
Net thickness (feet)	140 – 450
Total organic content (TOC)	3% – 7%
Log porosity	6% – 9%
Permeability (nD)	700 – 3000
Pressure gradient (psi/foot)	0.4 – 0.7
Water saturation	13% – 25%
Average lateral length (feet)	5,000 – 8,000
Oil-in-place/section (mmbo/section)	40 – 70
Gas-in-place/section (bcf/section)	140 – 150
Anticipated recovery factor – oil	6% – 10%
Anticipated recovery factor – wet gas	30% – 40%
Average EUR/horizontal well (mboe)	595

– Blend of oil and wet gas

Eagle Ford Shale has some of the best rock properties of all U.S. shale plays

Eagle Ford Shale – Development Plan

- CHK leasehold of ~625,000 net acres
  - ~600,000 net acres initially part of 67/33 JV with CEO
- 4 - 10 wells from single surface pad
- Lateral length: 5000’ - 8000’
- Nominal spacing: 500’ - 660’ between wells
- Targeted EUR
  - 595 mboe (blended oil and wet gas)
- Target Drilling and completion costs of ~$5.5 mm per well
  - Currently ~$6.5 mm per well
- Target Days to drill well (spud to spud): 20-24 days
  - Currently 25 – 30 Days
- Total unrisked unproved resource potential: ~3.5 billion boe
- Average operated rig count:
  - Year-end 2010: 12 rigs
  - Year-end 2011: ~31 rigs
  - Year-end 2012: ~40 rigs

Note: resource potential assumes 80-acre spacing

Unparalleled growth plan in the Eagle Ford

Initial Planning of a CHK Eagle Ford Well

- **Currently Employ 2 Well Construction Schemes**
  - Primary Casing Design
    - 9 5/8" (40#/ft, J-55, LT&C) Surface Casing (Inside 12 1/4" Hole)
    - 5 ½" (23#/ft, P-110, CDC) Production Casing (Inside 8 ¾" Hole)
  - Alternate Casing Design
    - 10 ¾" (45.5#/ft, J-55, BT&C) Surface Casing (Inside 13 ½" Hole)
    - 7 5/8" (29.7#/ft, P-110, LT&C) Int. Casing (Inside 9 7/8" Hole)
      - Can be omitted if not needed
    - 5 ½" (23#/ft, P-110, Ultra SF) Production Casing (Inside 6 ¾" Hole)
- **Well Construction is based on Offset Prod./Well History**
  - Austin Chalk Depletion is Primary Driver
  - Olmos Production does not have a large effect
- **Directional Design/Control and Anti-Collision**
  - Initially drilling first wells on Pad
  - Pads could hold 4 to 10 wells total
  - Directional Tools are picked up from underneath conductor

Directional Planning

- **Surface Nudges**
  - 0.5 to 1.0 DLS
  - Inclinations of 1 to 5 Degrees
- **Tangent and Curve Sections**
  - Utilize a Build-Hold-Build Design
    - Initial Build 1 to 2 DLS
    - Curve Section 12 DLS
  - Curve Sections are Typically Build/Turn
    - Opposed to S-Shaped Curve
    - More Complex Design and Execution
    - Buckling Reductions
      - » Torque and Drag Reductions
- **Lateral Sections**
  - Maximize ROP while maintaining 15 foot vertical window and a 30 foot horizontal window.

Torque and Drag / Hydraulics Modeling

- **Utilize Landmark Software Package**
  - COMPASS
  - WELLPLAN
- **WELLPLAN**
  - Torque/Drag Reduction
  - String Design Considerations
    - 5” – 4.5” DP Design
    - Need for Heavyweight and Placement
    - Trips for Shock Sub/Agitator Installation
  - Circumstances Limiting Design Ability
    - Lease Line Conditions and Proximity
    - Maximizing Lateral within Production Unit
  - Verification of Equipment Capabilities
  - Hydraulics Modeling
    - Flowrate Predictions at TD
    - Agitator Losses
    - Dual Size DP advantages.

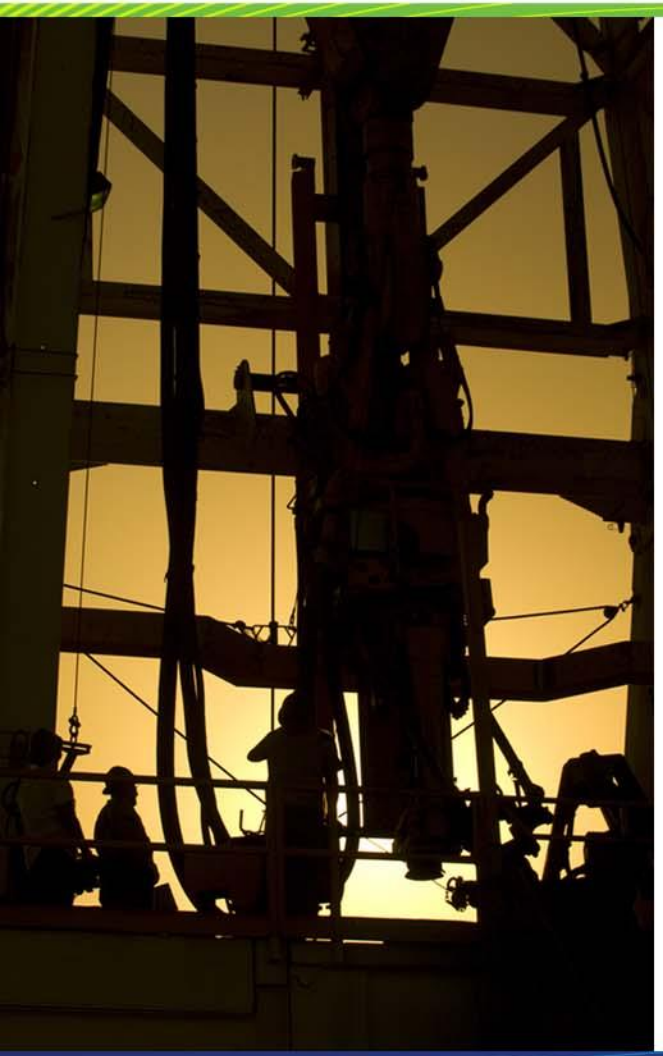
Drilling Operations by Hole Section

- **Surface Hole**
  - Directional Plan/Control
    - Nudge to Prevent Surface Anti Collision Issues
    - Helps reduce Inclinations in Tangent Section
  - Equipment Considerations
    - High Torque/Low Speed Motors
    - PDC Bits - 6 or 7 Blade, 16 MM Cutters
      - DBR's on More Aggressive Bits observed
  - Surface Casing Setting Depths
    - 1,300' to 4,800' (100' to 150' into Midway Shale)
    - McMullen County is only exception
  - Drilling Fluids - LSND / Spud Muds
    - Gumbo Shales present in Certain Areas
    - 500' to 1,500' Deep
    - Control Drill with Fresh Water
      - Drilling Detergents and SAPP

Drilling Operations by Hole Section

- **Tangent Hole**
  - FIT 14 ppg to 16 ppg
  - Directional Plan
    - Build Up to Hold Inclination for Directional Plan to KOP
      - Rotate Out 100’ to 200’
      - This will put High Side Wall Forces in Open Hole Section
      - Casing Wear kept to minimum
  - Equipment Considerations
    - High Torque / Low Speed Motor
    - PDC Bits – 5 Blade 19 MM and 22 MM Cutters
      - Have not seen DBR Issues
  - Drilling Fluids - 80/20 OBM (10.0 ppg to 10.5 ppg)
    - Midway Shale Inhibition
    - HTHP 6 to 8
    - Solids Control Equipment Important
    - Occasional Manageable Losses from Olmos

Drilling Operations by Hole Section



- **Curve Section**
  - Directional Plan
    - Build and Turn on 12 DLS total
    - Important to not get behind in Turn
    - Advantages for Buckling
      - Torque/Drag Reduction
      - More Complex than S Shaped Curves
  - Equipment Considerations
    - High Torque / Low Speed Motors
    - PDC Bits – 5 Blade 13 MM Cutters
      - Directional Control
      - Short Gauge / Flat Cone Profile
  - Drilling Fluids - 80/20 OBM (10.0 ppg to 13.8 ppg)
    - HTHP 4 to 6
    - Solids Control Equipment Important
    - Possible Severe Losses in Austin Chalk

Drilling Operations by Hole Section

- **Lateral Section**
  - Directional Plan
    - All Target Changes kept to 1 to 2 DLS, if possible
    - Important to Drill inside Target Box – Do not paint line
  - Equipment Considerations
    - High Torque / Med Speed Motors
    - PDC Bits – 6 Blade 19 MM Cutters
      - Directional Control
      - Longer Gauge / Deeper Cone Profile
    - Use of Agitators
      - 5,000' to 5,500' Cut Off Point
      - Lateral Lengths are 6,500' to 7,000' Average
  - Drilling Fluids - 80/20 OBM (10.0 ppg to 13.8 ppg)
    - HTHP 4 to 6
    - Solids Control Equipment Important
    - 6 RPM Reading Important – Hole Cleaning
    - Clean Up Cycles – 100+ RPM

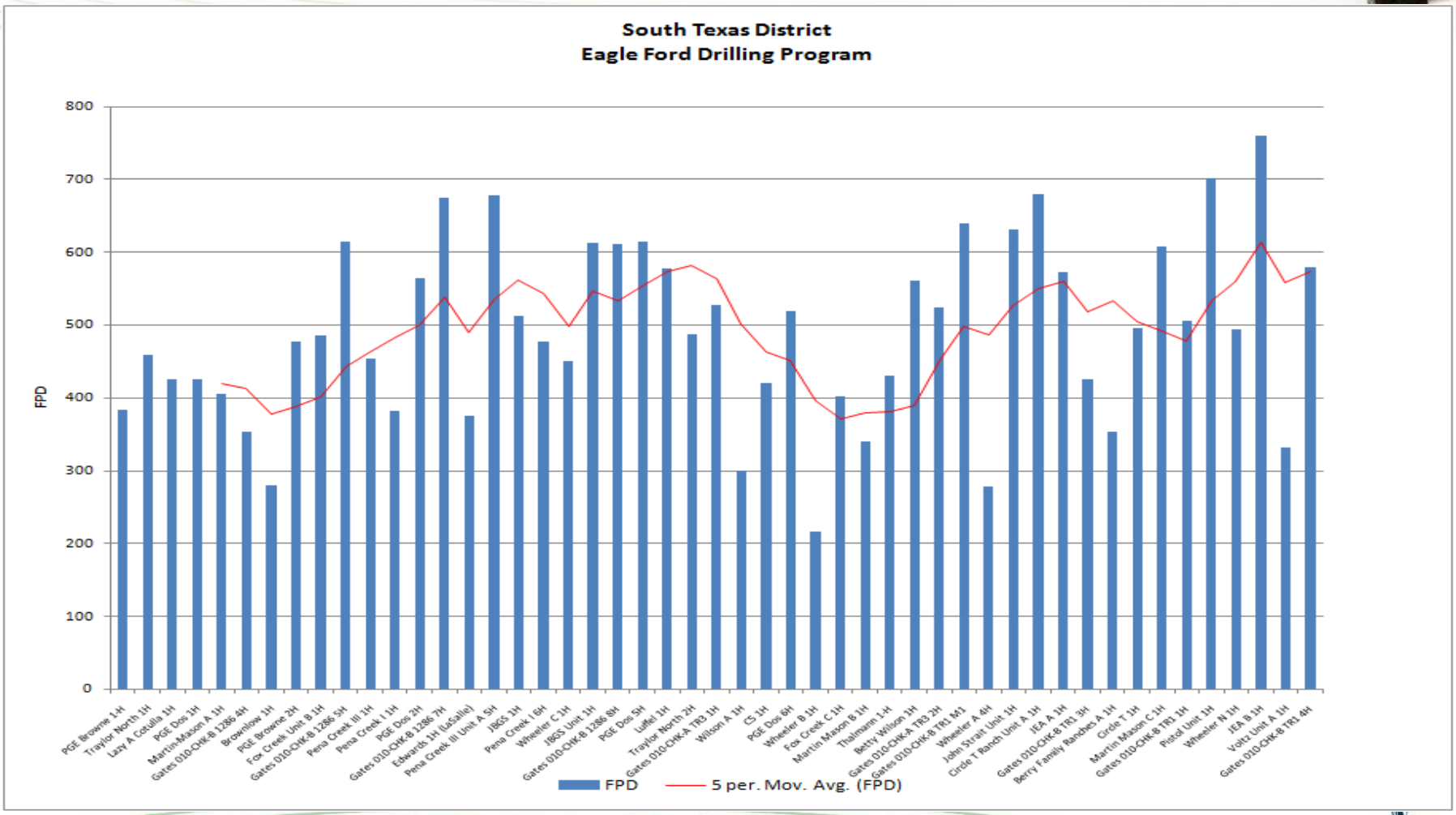
CHK Exploring New Methods in STX

- **Austin Chalk Depletion / Lost Circulation Issues**
  - Use of Water Based Mud
  - Managed Pressure / Under Balanced Drilling
    - Employed for Infield Drilling
    - Need to Identify Pads that have Issue
    - Training
  - Use of EM Directional Tools
    - Handle Larger Amounts of Loss Circulation Material
    - Faster Survey Time – Increased Efficiency

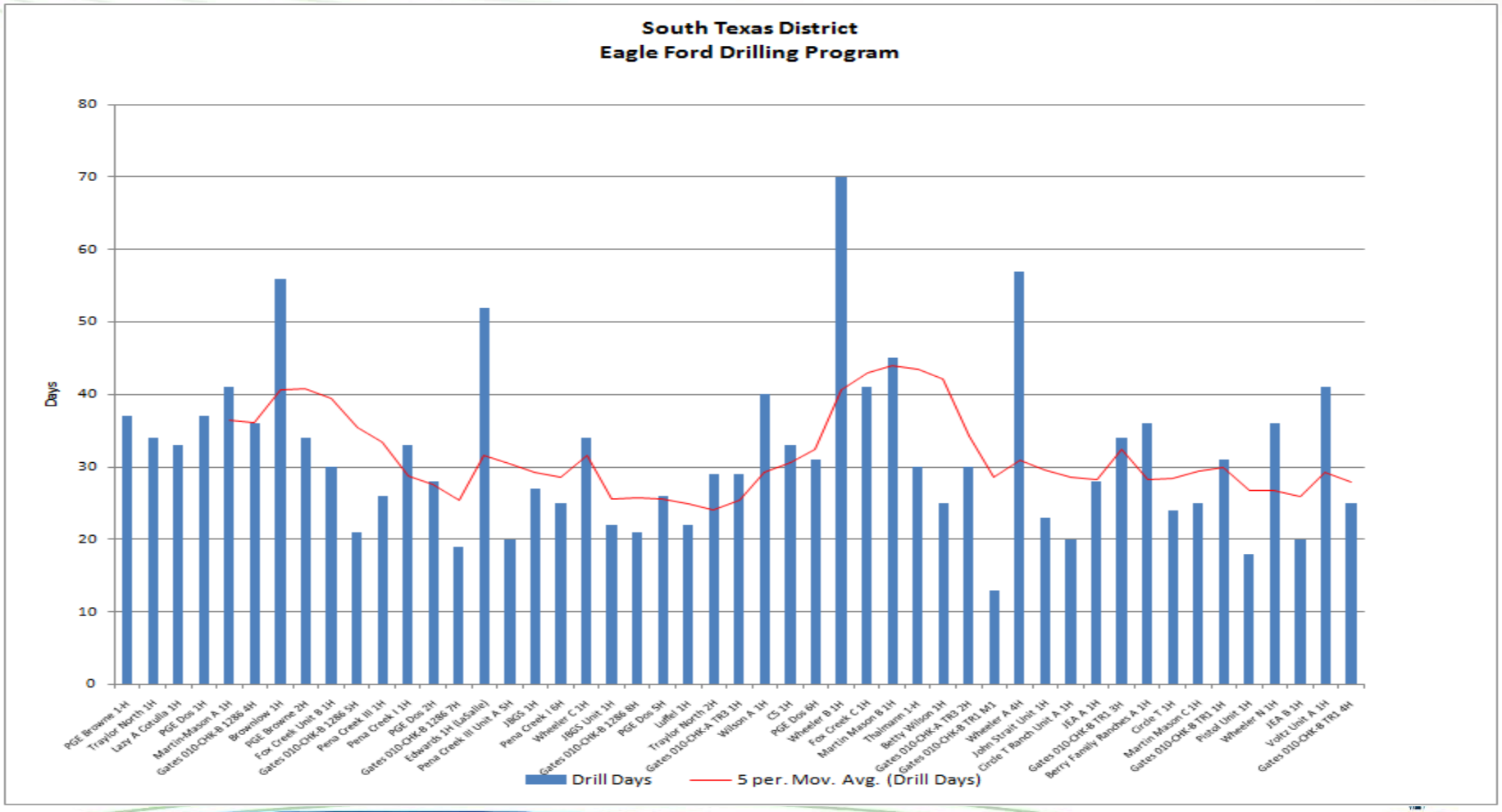
- **RSS Technology**
  - Long laterals where Sliding for Target Changes and Directional Control very difficult
    - Compare to use of Agitators
  - Currently trying RSS without Motors
    - Benefits gained from Motor Introduction.

- **Directional Drilling Tangent and Curve with One BHA**

Drilling Performance



Drilling Performance



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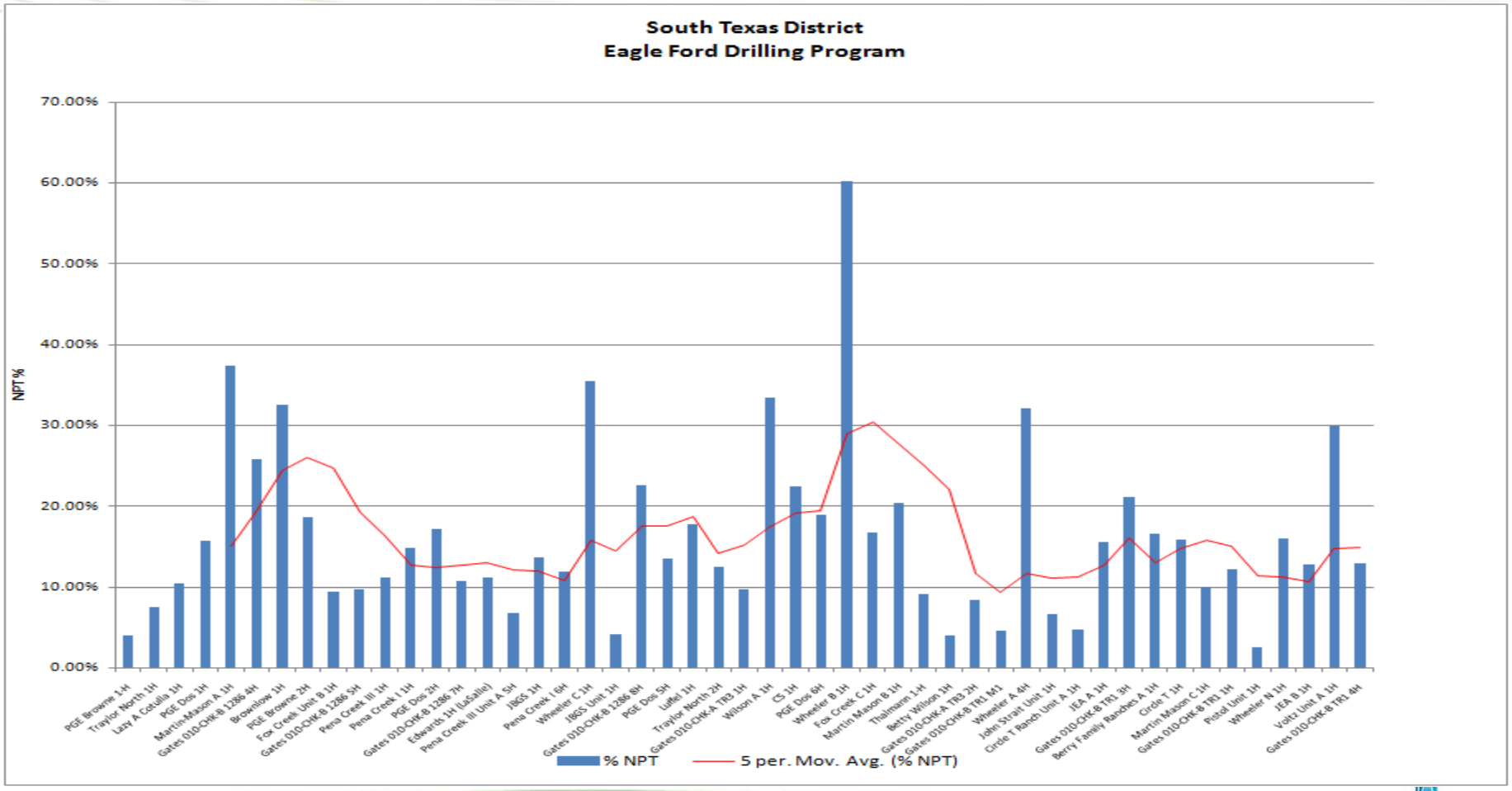
Drilling Performance



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Conclusion / Questions