- Resource Plays -
STACK AND SCOOP Overview

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The views presented here are the opinions of the presenter
The Evolution of Resource Plays

• 1990-1994 – Austin Chalk Horizontals

• Pre-2009 – Fayetteville/Haynesville/Barnett/Marcellus

• 2009-10 – Anadarko/Arkoma/Bakken/Eagleford

• 2011-12 – Miss Lime/Utica/Niobrara/Permian

• 2012+ – Powder/Uinta/Eaglebine/TMS/Brown Dense

• 2013 – Present – SCOOP/STACK/Springer/Eagleford ++
Resource Plays – Key Phases

- **Austin Chalk Horizontals – Early Days of Delineation Methods**
  - Technology – wellbore imaging, seismic for fractures, connectivity, water fracs
  - Shift from conventional economics
  - Optimized for longer term production

- **Arkoma Woodford – “Perfect” Rock**
  - Allowed initial development at scale – very brittle and fractured
  - Gas market drove IRR
  - Proppant Placement - Plug and Perf technology

- **SCOOP Woodford – Strong Type Curves**
  - Delineate HC windows for IRR sweet spots
  - Optimize... well spacing, stage spacing, proppant/fluids, drilling methods
  - Ramp up for scale – strong well performance drives IRR

- **STACK Meramec – Oil Shift with a New Play**
  - Transfer of SCOOP learnings to enhance assessment
  - Adapt to new rock type – petrophysics, core, reservoir modeling
  - Continued optimization improves IRR

- **SCOOP Springer – Not perfect but foreshadows future**
  - Demonstrates the potential for new plays to emerge in your backyard
  - Excellent ROI and illustrates the industry’s ability to adapt quickly
  - Example of unconventional/resource play dividing line
Anadarko Corridor

STATE of OKLAHOMA

Excellent Basins
Established Infrastructure
Friendly Regulatory Setting
Pooling Process
Vertical Control/Production
Phases Delineated
Healthy Competition
Prolific Stratigraphic Section
The Anadarko Corridor Section

North

STACK

(Observable)

SCOOP

South

Big Lime

Oswego

Cherokee Group

Manning/Chester
Limestone

Deese/Hoxbar

Caney

Horizontal Targets

Sycamore

Hunton

Woodford

Sylvan

Osage

Sycamore

Meramec

Goddard
Horizontal Re-development of Sooner Trend

STACK Area Sets Up Drilling Inventory

- World Class Source Rock
- Stacked Targets
- Shallowing up dip to N. East
- Deeper wells are over pressured
- Technology continues to deliver upside
The Resource Plays in the Oil Business

• Capital Efficiency drives everything from EPS to ROI
• Inventory drives scale to deploy substantial capital
• Excellent execution is essential; ideas are easy

History Repeats...

• People
• Placement
• Processes

Excellent execution at all levels solves the “impossible”