Overview

1. Hess Global Overview
2. Bakken and Utica Asset Overview
3. Leveraging Lean: Practical Lean Principles
4. The Journey Continues: Waste Elimination

Unconventionals Strategy

Using Lean to drive competitive advantage…

Maximize Bakken Value Delivery

- Execute 'Lean' manufacturing strategy
- Deliver first quartile performance
- Expand & infill acreage position
- Exploit infrastructure advantage

Leverage Capability

- Leverage Bakken capability to Utica and other plays
- Strengthen technical advantage
- Build relationships with preferred partners

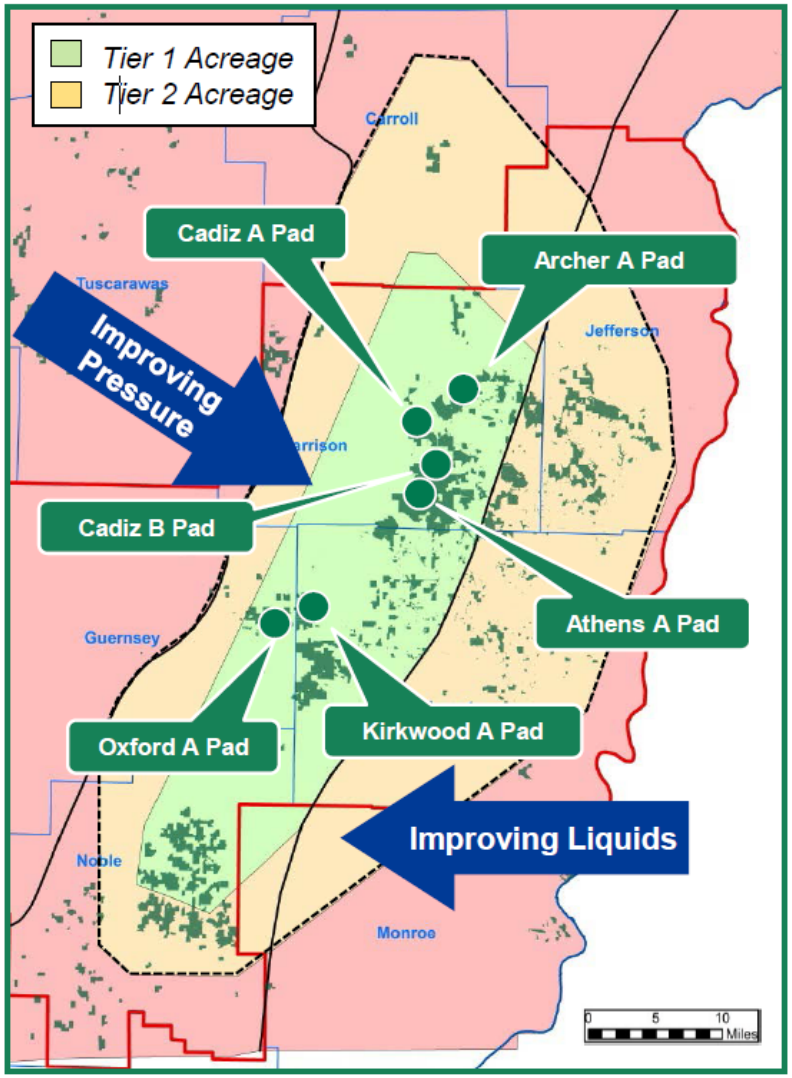
Grow Portfolio

- Capture new growth opportunities
- Consolidate as opportunities arise

Continual improvement unlocks additional opportunities

Hess in Ohio

Material Position in the Utica Wet Gas Window



Program Highlights

- 45,000 net acres
- Hess 50% WI, 95% gross NRI
- 2015 net prod. ~20 Mboe/d
- 2 rig program, reduced to 1 rig from June 2015
- 2015 capex $240 MM
- Net production goal of ~40 mboepd 2020+

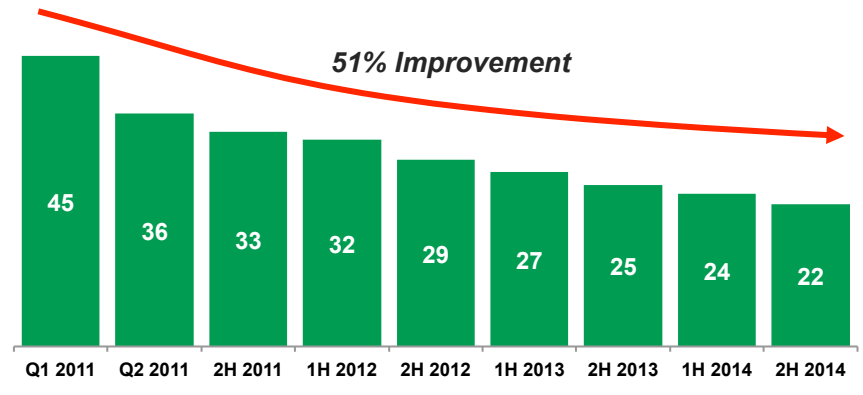
Core position in emerging Utica Shale play

Lean Delivering Significant Improvements

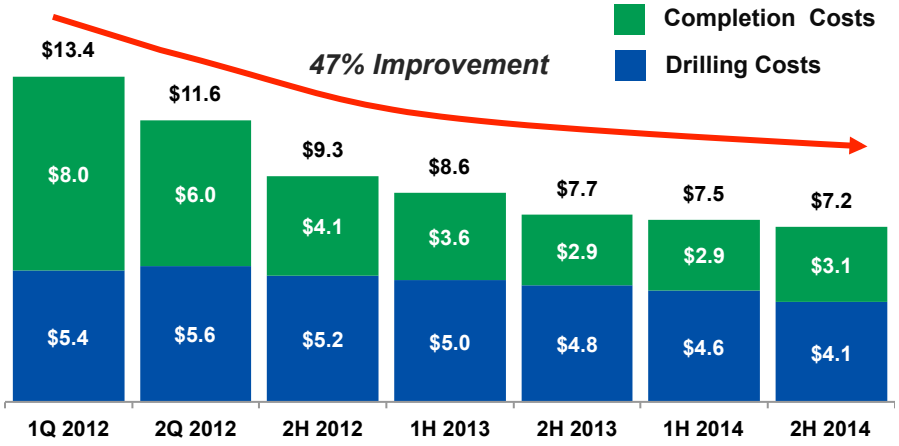
The drive to first quartile performance…

Bakken Well Delivery

Drilling Performance: Spud-to-Spud Days

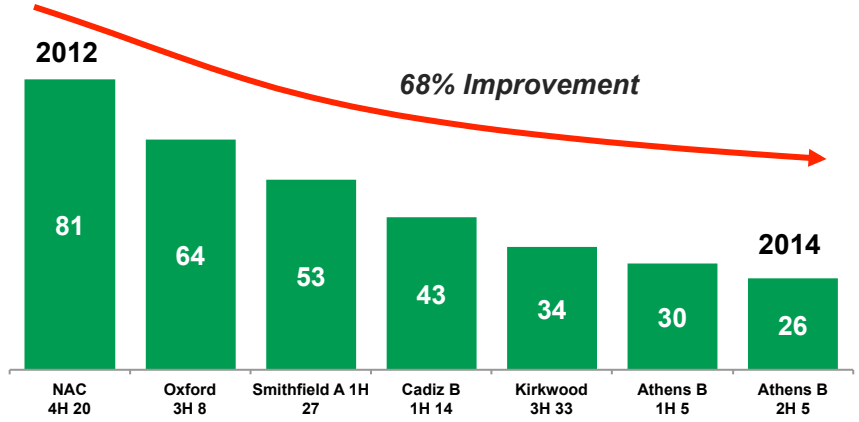


Drilling and Completions Cost ($MM)

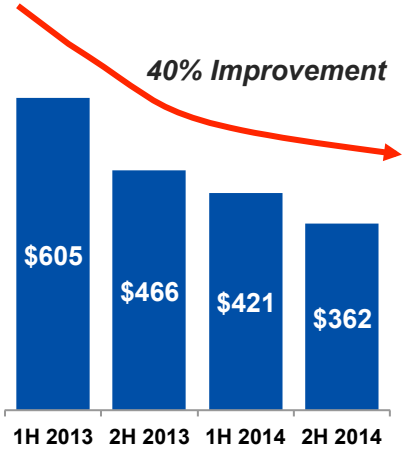


Utica Well Delivery

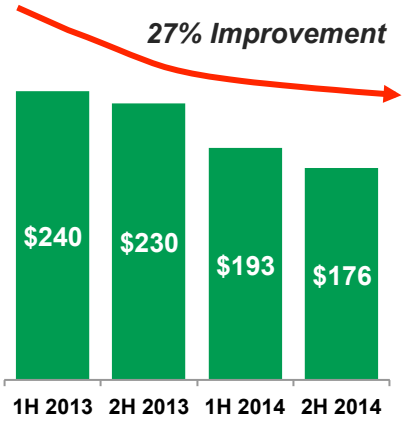
Drilling Performance: Spud-to-Spud Days



Drilling Cost ($M/foot)



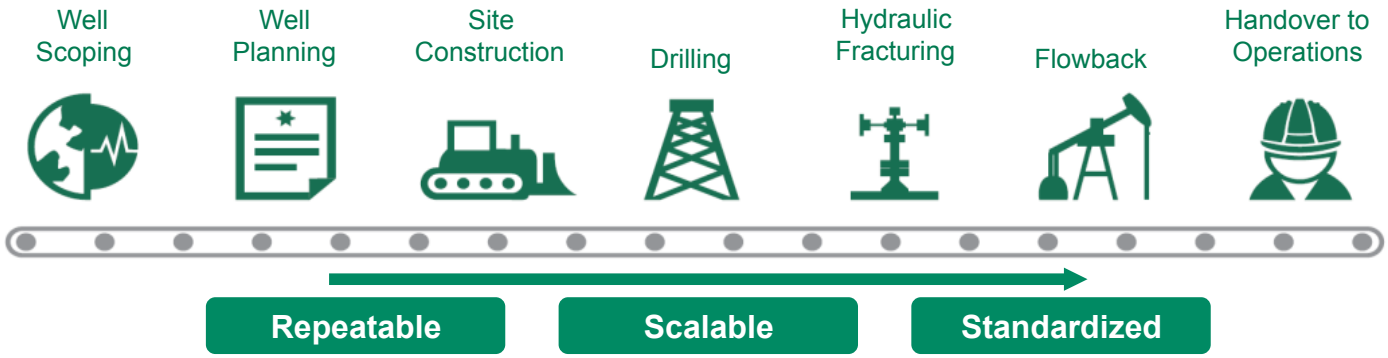
Completions Cost ($M/stage)



Bakken Lean practices accelerate Utica learning curve

Lean Manufacturing

Proven methodology to drive cost and efficiency improvements…



Lean Principles

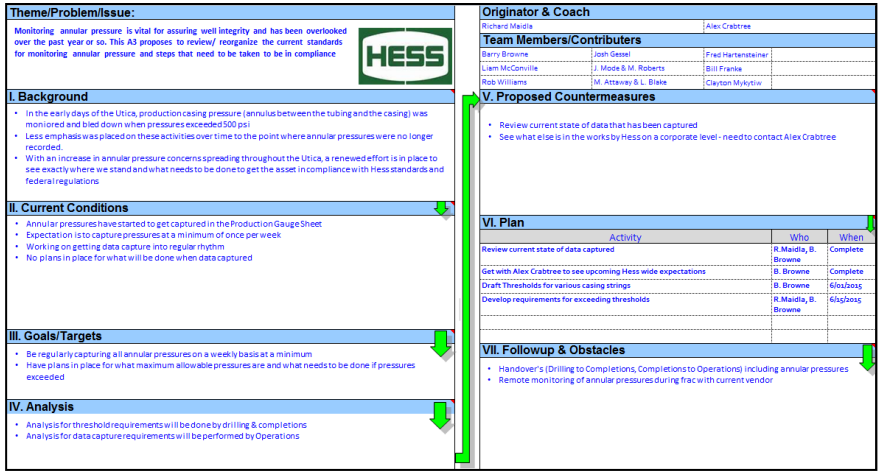
- Eliminate waste
- Customer-Supplier Relationships
- Structured Problem Solving
- Operating Rhythm with Visual Controls
- Defect Elimination/CI through Standard work

Leveraging Lean to drive improvement

Structured Problem Solving

Robust, shared problem solving method, aligned to business objectives…

- **Disciplined approach**
  - ✓ Team-Based Contributions
  - ✓ Incorporate Customers
  - ✓ Avoid “Solutions”
  - ✓ Follow Process



Theme/Problem/Issue:

Monitoring annular pressure is vital for assuring well integrity and has been overlooked over the past year or so. This A3 proposes to review/ reorganize the current standards for monitoring annular pressure and steps that need to be taken to be in compliance

Originator & Coach

Richard Maidla	Alex Crabtree

Team Members/Contributers

Barry Browne	Josh Gessel	Fred Hartensteiner
Liam McConville	J. Mode & M. Roberts	Bill Franke
Rob Williams	M. Attaway & L. Blake	Clayton Mykytiw

I. Background

- In the early days of the Utica, production casing pressure (annulus between the tubing and the casing) was moniored and bled down when pressures exceeded 500 psi
- Less emphasis was placed on these activities over time to the point where annular pressures were no longer recorded.
- With an increase in annular pressure concerns spreading throughout the Utica, a renewed effort is in place to see exactly where we stand and what needs to be done to get the asset in compliance with Hess standards and federal regulations

II. Current Conditions

- Annular pressures have started to get captured in the Production Gauge Sheet
- Expectation is to capture pressures at a minimum of once per week
- Working on getting data capture into regular rhythm
- No plans in place for what will be done when data captured

III. Goals/Targets

- Be regularly capturing all annular pressures on a weekly basis at a minimum
- Have plans in place for what maximum allowable pressures are and what needs to be done if pressures exceeded

IV. Analysis

- Analysis for threshold requirements will be done by drilling & completions
- Analysis for data capture requirements will be performed by Operations

V. Proposed Countermeasures

- Review current state of data that has been captured
- See what else is in the works by Hess on a corporate level - need to contact Alex Crabtree

VI. Plan

Activity	Who	When
Review current state of data captured	R.Maidla, B. Browne	Complete
Get with Alex Crabtree to see upcoming Hess wide expectations	B. Browne	Complete
Draft Thresholds for various casing strings	B. Browne	6/01/2015
Develop requirements for exceeding thresholds	R.Maidla, B. Browne	6/15/2015

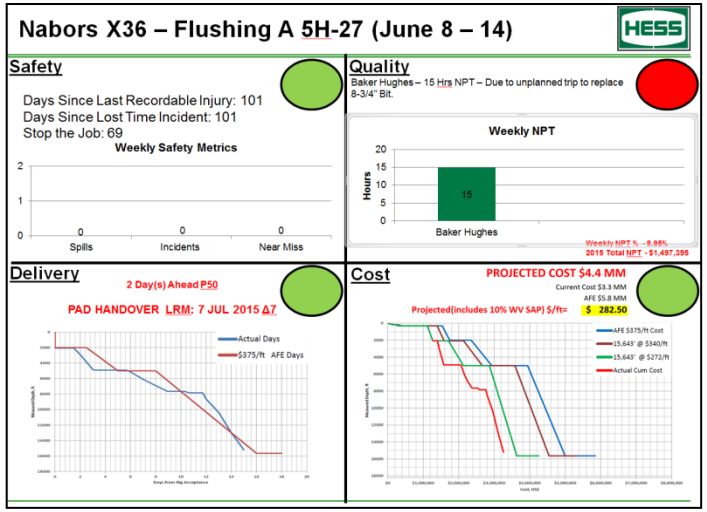
VII. Followup & Obstacles

- Handover's (Drilling to Completions, Completions to Operations) including annular pressures
- Remote monitoring of annular pressures during frac with current vendor

- **Concise and accurate definition of the problem**
  - ✓ What is the current condition? Need data.
  - ✓ What problem are we trying to solve? Views vary.
- **What is the Future State, Goal or Target?**
- **What are proposed Countermeasures? Who? When?**
  - ✓ Is a root cause identified? Not to be confused with “solutioning.”
  - ✓ Serves as a record in the future and more efficient problem solving

Operating Rhythm with Visual Controls

Scheduled meetings to drive and manage efficiency…

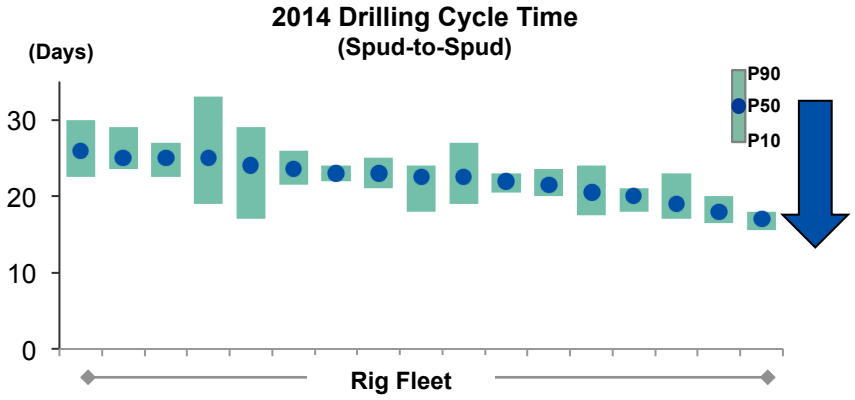


- **Open visual meeting space**
  - ✓ Recurring time dedicated to coordination
  - ✓ Expectations are clearly understood
  - ✓ Consistent visual "Scoreboard"
- **Manage by exception**
  - ✓ Focus on Highlights and Hot Spots
  - ✓ Typically "Stand-Up" meetings facilitate focus
  - ✓ Do not cover activities that are on target
  - ✓ Increases efficiency – Can cover a lot of ground in a short meeting
- **Allocate resources quickly and enact countermeasures**
  - ✓ Action appropriately with accountability and deadlines

Further Standardization

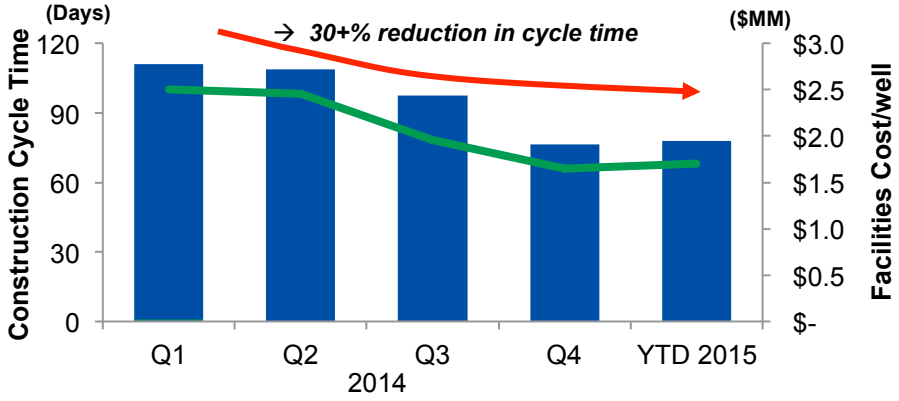
Distinctive Lean manufacturing approach…

Improving Standards to Deliver Better Performance



Facilities Delivered Faster at a Lower Cost

Implementing a standard design and construction process



Best Practices Deliver Improvements

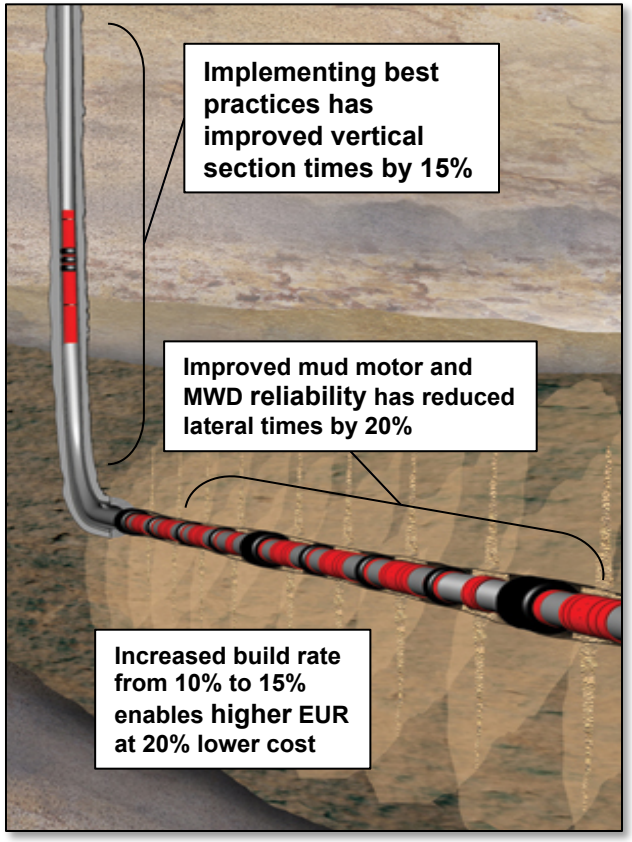


Image Source: Halliburton

Refining standard processes, a Lean approach to deliver further improvement

Summary

- Successfully leveraging skillset to other assets
- Lean manufacturing key enabler
- Positioned well for low price environment
- What is the possibility for North America?

"People Make the Difference at Hess"