Step Changes in Permian Basin Directional Drilling

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CIMAREX

AADE Midcontinent
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Tulsa, OK

2/19/14
Forward-looking Statements

This presentation contains projections and other forward-looking statements within the meaning of Section 27A of the U.S. Securities Act of 1933 and Section 21E of the U.S. Securities Exchange Act of 1934. These projections and statements reflect the Company’s current views with respect to future events and financial performance. No assurances can be given, however, that these events will occur or that these projections will be achieved, and actual results could differ materially from those projected as a result of certain factors. A discussion of these factors is included in the Company’s periodic reports filed with the U.S. Securities and Exchange Commission.

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Outline

- Quote
- Cimarex Strategy
- Permian Basin Overview
- Curves – Hybrid Bits
- Curves – High Dogleg RSS
- Laterals – RSS Application
I have not failed. I’ve just found 10,000 ways that won’t work

- Thomas Edison
## Corporate Profile

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shares outstanding</td>
<td>86.6 MM</td>
</tr>
<tr>
<td>Proved reserves</td>
<td>2.3 Tcfe</td>
</tr>
<tr>
<td>Market cap</td>
<td>$8.4 B</td>
</tr>
<tr>
<td>% Natural gas</td>
<td>55%</td>
</tr>
<tr>
<td>Long-term debt</td>
<td>$0.9 B</td>
</tr>
<tr>
<td>% Proved developed</td>
<td>80%</td>
</tr>
<tr>
<td>Enterprise value</td>
<td>$9.3 B</td>
</tr>
<tr>
<td>R/P Ratio</td>
<td>9.9x</td>
</tr>
<tr>
<td>Stockholders' equity</td>
<td>$3.8 B</td>
</tr>
<tr>
<td>Production</td>
<td>717 MMcfe/d</td>
</tr>
<tr>
<td>Debt/Cap</td>
<td>19%</td>
</tr>
</tbody>
</table>

Quarterly dividend of $0.14/share

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1 Share price as of February 4, 2014
2 As of September 30, 2013
3 As of December 31, 2012
4 Third quarter 2013
Cimarex Strategy

Grow through the drill-bit
• Generate our own drilling inventory

Portfolio approach
• Keep a mix of opportunities…gas/oil; low-medium-higher risk projects; seek geologic and geographic diversity

Rate of return based decisions
• Strong relative oil prices have resulted in capital shift
• Expanding Permian Basin operations and focus on liquids rich shale projects
• Growing oil and NGL proved reserves
Permian Basin

Brushy Canyon

<table>
<thead>
<tr>
<th>Del. Mtn.</th>
<th>Bone Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Carbonate/Avalon Shale</td>
<td></td>
</tr>
<tr>
<td>1st Sand</td>
<td></td>
</tr>
<tr>
<td>2nd Carbonate</td>
<td></td>
</tr>
<tr>
<td>2nd Sand</td>
<td></td>
</tr>
<tr>
<td>3rd Carbonate</td>
<td></td>
</tr>
<tr>
<td>3rd Sand</td>
<td></td>
</tr>
</tbody>
</table>

Wolfcamp
Wellbore Design – Big Hole

<table>
<thead>
<tr>
<th>Hole</th>
<th>Formation</th>
<th>Mud</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-1/2''</td>
<td>Rustler</td>
<td>Fresh Water</td>
</tr>
<tr>
<td>13-3/8'' 48# J-55</td>
<td>Top Salt</td>
<td>Brine</td>
</tr>
<tr>
<td>12-1/4''</td>
<td>Bottom Salt</td>
<td>Cut Brine</td>
</tr>
<tr>
<td>9-5/8'' 40# J-55</td>
<td>Bell Canyon, Cherry Canyon, Bone Spring, Avalon Shale, 1st Bone Spring</td>
<td></td>
</tr>
<tr>
<td>8-3/4''</td>
<td>2nd Bone Spring</td>
<td></td>
</tr>
<tr>
<td>3rd Bone Spring Carbonate</td>
<td>Production Casing: 5-1/2'' 17# P110</td>
<td></td>
</tr>
</tbody>
</table>
Curve Drilling – Hybrid Bits

Penetration Rate

Worst

Best

TCI

Hybrid

PDC

Steerability / Dogleg Yield

Worst

Best

TCI

Hybrid

PDC
Curve Drilling

Evaluate Geologic Horizon and Area

Decision Tree

- Try PDC bits first
- If PDC durability is an issue → Hybrid
- If build rates cannot be risked → Insert

Evolving bit technology
**Curve Drilling – Hybrid Bits**

- **Insert Bits**
  - 3.70 Days

- **PDC Bits**
  - 3.87 Days

- **Hybrid Bits**
  - 1.99 Days

![Chart showing curve drilling days for different types of bits.]

*2nd BSS - SW Lea County - 750' Curve - 12 Degree Build Rates*

- Blue = Insert
- Green = PDC
- Red = Hybrid
Curve Drilling – Hybrid Bits

- **Insert Bits**
  - 3.18 Days

- **PDC Bits**
  - 4.59 Days

- **Hybrid Bits**
  - 1.63 Days

![Curve Drilling Days](image)

- Blue = Insert
- Green = PDC
- Red = Hybrid

3rd Bone Springs - Quail Ridge Area - 750' Curve - 12 Degree Build Rates
Curve Drilling – High Dogleg RSS

- PDC Bits Only
- Bent Motors
  - 1.51 Days
- Curve RSS
  - 0.88 Days

![Chart showing curve drilling days for 2012 and 2014. Blue bars represent Bent Motors, red bars represent Curve RSS.](chart.png)
Curve Drilling – Pilot Holes

Pilot Hole Kickoff Options

1. Cement Plug $\rightarrow$ Time Drill with Bent Motor
2. Open Hole Whipstocks
3. Cement Plug $\rightarrow$ Kickoff with Curve RSS

- Successfully kicked off 7 cement plugs with high dogleg RSS
Lateral Drilling

New Mexico Bone Spring
- Avalon/Leonard Shale
- 1st Bone Spring Sand
- 2nd Bone Spring Sand
- 3rd Bone Spring Sand

Big Hole Well Design
Play dominated by Bent Motors
Could Rotary Steerables be economic?
Lateral Drilling

Rotary Steerable Systems (RSS)

Advantages

- Increased ROP
- Smoother Wellbore
- Longer Reach for Extended Laterals

Disadvantages

- Increased Directional Day Rate
- More Complex / More Moving Parts
Lateral Drilling – RSS Performance

**Bent Motor**
- 5.87 Days

**RSS**
- 3.00 Days

**2.87 Days Saved**

![Graph showing Lateral Drilling Days for 2nd Bone Spring - Southwest Lea County - 4000' Lateral. Blue bars represent Bent Motor and Red bars represent RSS. The graph indicates a decrease in drilling days from 2012 to 2014.](image-url)
Lateral Drilling – RSS Performance

- Bent Motor
  - 7.83 Days

- RSS
  - 2.55 Days

5.28 Days Saved

![Lateral Drilling Days](image)

- Blue = Bent Motor
- Red = RSS

Avalon Shale - Southwest Lea County - 4000' Lateral

Days

Wells (Chronological Order)

2012

2014
# Lateral Drilling – RSS Economics

<table>
<thead>
<tr>
<th>Bent Motors</th>
<th>Rotary Steerable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rig Rate - Without Directional</td>
<td>$ 40,000</td>
</tr>
<tr>
<td>Directional Cost</td>
<td>$ 15,000</td>
</tr>
<tr>
<td>Total Spread Rate</td>
<td>$ 55,000</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Drilling Time</td>
<td>5.87 Days</td>
</tr>
<tr>
<td>Tripping Time</td>
<td>2.00 Days</td>
</tr>
</tbody>
</table>

Total 7.87 x $55,000 = $432,850

<p>| | |</p>
<table>
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</tr>
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<tbody>
<tr>
<td>Rig Rate - Without Directional</td>
<td>$ 40,000</td>
</tr>
<tr>
<td>Directional Cost</td>
<td>$ 30,000</td>
</tr>
<tr>
<td>Total Spread Rate</td>
<td>$ 70,000</td>
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Total 5 x $70,000 = $350,000

**Cost**
- -$82,850
- -19%

**Time**
- -2.87 Days
- -49%
Strategic Elements

- In-House Directional Project Manager
- In-House Bit Engineer
- Standardized BHAs
- Consistent Personnel
- Teamwork at all levels
Questions?

Recap:
- Cimarex Strategy
- Permian Basin Overview
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