Crude Quality Impacts on Midstream in the DJ and Permian Basins

May 23rd, 2018
About ARB Midstream

Privately-held, growth-oriented company, providing complete midstream and marketing solutions for crude oil, LPGs and refined products

Premier Asset Portfolio

- Gathering and Transportation assets in multiple resource basins across the U.S.
- Marketing and Logistics services for crude, LPG and refined products across North America
- Storage & Terminals including multi-commodity rail transloading terminals in Weld Co.

Positioned for Growth

- Actively building portfolio and investing in America’s most profitable plays
- Evaluating strategic acquisitions
- Developing producer relationships for innovative greenfield projects

Industry Leading Analytics

- Every step in ARB’s strategy is rooted in proprietary analytics that are used to understand and predict market opportunities, to reduce risk, and improve capital efficiency within individual projects
Key Priorities
Creating Value in Midstream Markets

ARB Midstream’s industry experience and proprietary analytics create a risk-reduced portfolio of strategic opportunities.

**Identify**
- Utilize in-house analytics to screen and target projects and basins that have unique opportunities to create value
- Identify infrastructure bottlenecks
- Seek under-served, long-term oil plays

**Analyze**
- Experienced management team executes on opportunities quickly and efficiently
- Early-mover in target markets
- Deployment of capital through private financial backing

**Execute**
- Develop and operate assets with long-term, sustainable returns
- Experienced and trusted operations team manage assets safely and efficiently

**Operate**
- Create long-term relationships with producer partners and stakeholders
ARB Asset Base and Strategic Footprint

ARB Positioning

- Diversified operations across multiple resource basins in the continental U.S.
- Strategic presence in basins with high growth outlooks
- Areas of involvement include crude oil and liquids marketing, rail transport, storage and pipeline gathering
- Currently evaluating over $500MM in acquisitions and green-field development projects
### Core Business Segments

**Diversified and integrated asset portfolio**

<table>
<thead>
<tr>
<th>Gathering &amp; Transportation</th>
<th>Description</th>
<th>ARB Assets/Capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Crude oil gathering systems</td>
<td>157,000 bbl/d crude gathering system in the Niobrara and Wattenberg plays in Weld County, Colorado</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14,000 bbl/d truck offload capacity at Lucerne Hub with access to NGL’s Grand Mesa Pipeline</td>
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<tr>
<td></td>
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<td>170,000 bbl of storage at Lucerne Hub</td>
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<table>
<thead>
<tr>
<th>Marketing &amp; Logistics</th>
<th>Description</th>
<th>ARB Assets/Capabilities</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Marketing and logistics for crude oil, LPGs and refined products</td>
<td>Operations include more than 30,000 barrels per day of lease purchasing and physical crude trading across the North American inland corridor markets, including the Rockies, Cushing/Midcon, and Gulf Coast</td>
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<tr>
<td></td>
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<td>Crude capacity on multiple pipelines and &gt;400,000 barrels of storage</td>
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<table>
<thead>
<tr>
<th>Storage &amp; Terminaling</th>
<th>Description</th>
<th>ARB Assets/Capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Energy logistics terminals and storage facilities for crude oil, LPGs, and oilfield commodities</td>
<td>6,500 bbl/d of rail-to-truck crude transload capacity in the Niobrara</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Incremental 145,000 bbl/d crude rail terminal capacity planned in the Midland basin and Niobrara</td>
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</table>
Gathering + Transportation
DJ Basin Positioning and Outlook

Area Positioning
- ARB’s DJ Basin assets are focused in the core Wattenberg of Weld County
- Top tier producer relationships for crude oil gathering and transportation
  - Supported by long term MVC’s and acreage dedications
  - Total dedications exceeding 200,000 gross acres
- > 157,000 bpd of total system throughput capacity
- > 170,000 bbls of total storage capacity

Area Strategy
- Focused on opportunities to add additional producer commitments and expand asset footprint
- Upside opportunities to add water and gas services in new areas of the basin
- Regional asset-level M&A opportunities

Geographic Footprint

Near-Term Outlook
- Increasing drilling activity on ARB dedicated acreage as commodity prices stabilize
- Customers currently operating five rigs on our system
- Development of growth projects to provide increased footprint in order to capture additional acreage
- Significant volume increases expected over next 12-24 months
Observations

- **DJ Basin Production**
  - As operators move to pad drilling, production areas are becoming more focused
  - Horizontal IP30 rates have shown some improvements, but individual producers are seeing big improvements
  - DJ Basin crude production quality is getting heavier as drilling activity moves outside of the core Wattenburg
  - Takeaway infrastructure has sufficient capacity for the coming years; economics will be driven by committed space rather than total capacity

- **Permian Production**
  - Since 2016, Permian drilling activity has become centered within Midland and Delaware basins
  - Horizontal IP30 rates have increased across the basin, and continue to be some of the highest in the U.S.
  - 57% of production growth in the Permian comes from the lighter quality Delaware basin
  - Permian takeaway capacity will be constrained through 2020, causing continued pressure on price spreads
DJ Basin
Operators are focusing on pad development, creating condensed pockets of development.
Horizontal well IP30 rates show growth over the last 2 yrs, select producers showing drastic improvements.
Producers are targeting zones outside the lighter Wattenburg core, yielding slightly heavier crude quality.
New focus in production has lowered the weighted average crude quality in the DJ Basin.

- **Production by Gravity (bpd)**
  - **PXP (90)**
  - **Saddlehorn (190)**
  - **Grand Mesa (150)**
  - **White Cliffs (215)**

- **Year**
  - 2016: Production (bpd)
  - 2018: Production (bpd)

<table>
<thead>
<tr>
<th>Year</th>
<th>Wavg Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>46.03</td>
</tr>
<tr>
<td>2018</td>
<td>44.62</td>
</tr>
</tbody>
</table>
Takeaway infrastructure in the DJ Basin
Permian drilling activity becoming much more centered within Midland and Delaware Basins
Midland basin horizontal IP30 rates are some of the highest among U.S. basins.
Permian production quality has a wide spectrum, with the Delaware providing most of the lighter material.
57% of production growth in the Permian comes from the lighter quality Delaware basin.
Incremental growth in production from 2016 to 2018 largely from 40-50 API gravity crudes

<table>
<thead>
<tr>
<th>Gravity</th>
<th>Growth</th>
<th>% Total Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>31-35</td>
<td>31,103</td>
<td>4%</td>
</tr>
<tr>
<td>36-40</td>
<td>252,440</td>
<td>28%</td>
</tr>
<tr>
<td>41-45</td>
<td>390,832</td>
<td>44%</td>
</tr>
<tr>
<td>46-50</td>
<td>155,502</td>
<td>18%</td>
</tr>
<tr>
<td>51-55</td>
<td>33,345</td>
<td>4%</td>
</tr>
<tr>
<td>56-60</td>
<td>4,616</td>
<td>1%</td>
</tr>
<tr>
<td>60+</td>
<td>20,721</td>
<td>2%</td>
</tr>
</tbody>
</table>

The diagram shows the change in production by API gravity for Delaware, Midland, and Other categories.
Permian takeaway capacity will be constrained through 2020, causing continued pressure on price spreads.
Conclusions

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