PAA Has One of The Largest And Most Integrated Crude Oil Pipeline & Terminal System in the U.S.

**Plains’ Financial Profile**

- **Total Enterprise Value:** $34.4B
  - Equity Market Cap: $24.3B
  - Total LT Debt: $10.1B
- **PAA/PAGP Current Yields:** +/- 7.0%
- **PAA Total Assets:** $24.2B
- **PAA Moody’s / S&P / Fitch:** Baa3/BBB-/BBB

**PAA Assets (12/31/16)**

- >20k active pipeline miles
- 142mmbls of liquids storage
- 97Bcf of natural gas storage
- ~230mb/d net capacity at fractionation facilities
- ~10Bcf/d net capacity at natural gas processing facilities
- 34 rail facilities (crude & NGL)
- >10k crude & NGL railcars
- >800 trucks (~1,900 trailers)
- >4.6 mmb/d crude & NGL volumes

Note: Map contains only most significant PAA assets, including recent/pending acquisitions, current projects and equity investments assets (excludes non-core assets where sale is announced/pending).

(1) As applicable, based on balance sheet data as of 12/31/16, 03/24/17 closing unit prices and distributions paid on 02/14/17.
(2) Preferred equity included in Equity Market Cap. Includes PAA at $15.2B and PAGP at $9.1B (PAGP includes Plains AAP units).
(3) Natural gas processing capacity also includes approximately 7.5 Bcf per day for a long-term liquid supply contract.
(4) Average daily Transportation segment volumes for the year ending 12/31/16.
PAA Has One of The Largest And Most Integrated Crude Oil Pipeline & Terminal System in the U.S. (continued)

PAA Has:

1. Highly integrated crude oil pipeline & terminal system in the U.S.
2. Minimal direct exposure to commodity prices
3. Multiple expansion projects coming on-stream supported by long-term contracts
Plains’s Patoka terminal went into service December 2008 with 5 tanks and 2.8 million barrels of storage capacity

- Today 16 tanks in service with total capacity of 6.5 million barrels of storage
  - Expanding to 17 tanks for 6.8 MMbbls by 3Q 2017

- Largest tank farm in Patoka

- Product Flows
  - Pipe in/out
  - No Rail
  - No Truck (Connected Patoka Terminal Truck Facility)
  - No Marine
Patoka Terminal
Patoka Terminal Pipeline Connectivity

- Dakota Access
- Mustang
- Patoka West
- Capline
- Southern Access Extension
- Keystone
- WoodPat

- Map #1 (Lima Refinery)
- Map #2 (Robinson Refinery)
- Map #3 (Catlettsburg Refinery)

- Chicap
- ETCOP
- CountryMark (Mt. Vernon Refinery)
- Capwood
- Patoka West

Pipelines under construction noted in dashed lines
## Patoka Terminal Connectivity

<table>
<thead>
<tr>
<th>Pipeline System</th>
<th>Size</th>
<th>Rate/Hr</th>
<th>Rate/Day</th>
<th>Rec/Del</th>
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<tbody>
<tr>
<td>Patoka West</td>
<td>22”</td>
<td>10,000</td>
<td>240,000</td>
<td>R</td>
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<tr>
<td>Capline</td>
<td>42”</td>
<td>50,000</td>
<td>1,200,000</td>
<td>R</td>
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<td>Keystone</td>
<td>36”</td>
<td>25,000</td>
<td>600,000</td>
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<td>WoodPat (via Chicap)</td>
<td>20”</td>
<td>10,000</td>
<td>240,000</td>
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<tr>
<td>Dakota Access Pipeline</td>
<td>30”</td>
<td>19,500</td>
<td>470,000</td>
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<tr>
<td>Southern Access Pipeline</td>
<td>24”</td>
<td>13,750</td>
<td>330,000</td>
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<td>Capwood</td>
<td>20”</td>
<td>10,000</td>
<td>240,000</td>
<td>D</td>
</tr>
<tr>
<td>Patoka West (to Cattlesburg Refinery)</td>
<td>22”</td>
<td>8,500</td>
<td>204,000</td>
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<tr>
<td>(to ExxonMobil Pegasus)</td>
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<td>Lima Refinery (MPL)</td>
<td>20”</td>
<td>8,000</td>
<td>192,000</td>
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<tr>
<td>Robinson Refinery (MPL)</td>
<td>20”</td>
<td>8,000</td>
<td>192,000</td>
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<tr>
<td>Chipcap</td>
<td>26”</td>
<td>15,000</td>
<td>360,000</td>
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<tr>
<td>ETCOP</td>
<td>24” &amp; 30”</td>
<td>25,000</td>
<td>470,000</td>
<td>D</td>
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<tr>
<td>CountryMark (Mt. Vernon Refinery)</td>
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## Crude Grades

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<tr>
<th>Crude Type</th>
<th>Description</th>
<th>API Gravity</th>
<th>Sulfur (wt%)</th>
<th>VAN</th>
<th>Nic</th>
<th>TAN</th>
<th>VPCRx</th>
<th>Location</th>
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<tr>
<td>ACS</td>
<td>Alberta Common Syn</td>
<td>31.6</td>
<td>0.63</td>
<td>16.2</td>
<td>6.1</td>
<td>0.15</td>
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<td>AWB</td>
<td>Access Western Blend</td>
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<td>3.69</td>
<td>131.1</td>
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<td>BAK (BLS)</td>
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<td>1.0</td>
<td>0.10</td>
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<td>BHB</td>
<td>Borealis Heavy Blend</td>
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<td>3.60</td>
<td>129.4</td>
<td>46.1</td>
<td>2.40</td>
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<td>BR</td>
<td>Bow River</td>
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<td>2.80</td>
<td>75.2</td>
<td>26.0</td>
<td>0.50</td>
<td>4.07</td>
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<td>CDB</td>
<td>Christina Dilbit Blend</td>
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<td>0.10</td>
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<td>LLS</td>
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<td>1.0</td>
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<td>0.15</td>
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<td>OSH</td>
<td>Suncor Synthetic H</td>
<td>19.3</td>
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<td>SAH</td>
<td>Saharan Blend</td>
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<td>0.5</td>
<td>0.02</td>
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<td>SHB</td>
<td>Surmont Heavy Blend</td>
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<td>WCS</td>
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<td>West Texas Intermediate</td>
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<td>0.4</td>
<td>0.50</td>
<td>9.20</td>
<td>West Texas</td>
</tr>
</tbody>
</table>
Area Refining Capacity

- Based on EIA data, the 26 refineries in the Midwest PADD 2 region processed an average 3.6 million barrels/day of crude oil in 2016

- Patoka supplies over 2.2 million barrels/day of refining capacity within the PADD 2 Eastern District
  - BP Whiting
  - P66 Wood River
  - Marathon Catlettsburg
  - Exxon Joliet

Map source: GENSCAPE
Projects
Dakota Access Pipeline Connection

- **Terminal Connection:**
  - To Dakota Access Pipeline

- **Pipeline Capacity:**
  - Initial Capacity 470,000 bpd

- **Purpose:**
  - DAPL is designed to transport Bakken sweet crude oil grades to Patoka for distribution to Midwest refining markets and to the Gulf Coast via ETCOP for Gulf Coast refining markets
  - ETCOP is 744 miles of 30 inch pipeline that runs from Patoka, IL to Nederland, TX

- **Connection In-Service:**
  - May 2017
Southern Access Extension Connection

- **Terminal Connection:**
  - To Southern Access Extension

- **Pipeline Capacity:**
  - Initial Capacity 300,000 bpd

- **Purpose:**
  - Southern Access Extension (SAX) is 168 miles of 24 inch pipe originating at Enbridge’s Flanagan Terminal near Pontiac, IL terminating at Enbridge’s facility in Patoka, IL.
  - The project was designed to expand access to Midwest refinery markets for Bakken and Western Canadian light oil production

- **Connection In-Service:**
  - Q3 2017
CountryMark Refinery Connection

- **Terminal Connection:**
  - To CountryMark’s Mt. Vernon, IN refinery

- **Purpose:**
  - Provide CountryMark’s 30,000 barrel per day Mt. Vernon refinery with access to alternative crude sources from Plains’s Patoka Terminal

- **Connection In-Service:**
  - Q3 2017