Highlights from the Argus Americas Crude Summit January 23-25, 2013

Dennis Sutton
Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These forward-looking statements relate to, among other things, Marathon Petroleum Corporation’s (MPC) current expectations, estimates and projections concerning MPC business and operations. You can identify forward-looking statements by words such as “anticipate,” “believe,” “estimate,” “expect,” “forecast,” “project,” “could,” “may,” “should,” or “would” or other similar expressions that convey the uncertainty of future events or outcomes. Such forward-looking statements are not guarantees of future performance and are subject to risks, uncertainties and other factors, some of which are beyond the company’s control and are difficult to predict. Factors that could cause actual results to differ materially from those in the forward-looking statements include: further volatility in and/or degradation of market and industry conditions; the availability and pricing of crude oil and other feedstocks; slower than anticipated growth in domestic and Canadian crude supply; completion of pipeline capacity to areas outside the U.S. Midwest; consumer demand for refined products; changes in governmental regulations; transportation logistics; the availability of materials and labor, delays in obtaining necessary third-party approvals, and other risks customary to construction projects; the reliability of processing units and other equipment; our ability to successfully implement growth opportunities and business strategies; other risk factors inherent to our industry; and the factors set forth under the heading “Risk Factors” in MPC’s Annual Report on Form 10-K for the year ended December 31, 2011, filed with the Securities and Exchange Commission (the “SEC”). In addition, the forward-looking statements included herein could be affected by general domestic and international economic and political conditions. Unpredictable or unknown factors not discussed here or in MPC’s Form 10-K could also have material adverse effects on forward-looking statements. Copies of MPC’s Form 10-K are available on the SEC website, at http://ir.marathonpetroleum.com or by contacting MPC’s Investor Relations Office.
Over 300 Registrants
Profile of Attendees:

- Producer/Marketer: 22%
- Refiner/Buyer: 22%
- Midstream/Logistics: 21%
- Testing/Software/Data Providers: 12%
- Consultant/Government/Association: 10%
- Exchange/Bank/Broker: 8%
- Press/Other: 5%
The title of the two day conference was Boom, Base Load or Bottleneck?

After attending, my title (albeit less formal) would be

- All Hail to Shale and Rail!
The Agenda

In addition to two Keynote talks and a few special topics, the conference was organized into six sessions of two to four talks each:

- Session 1: The Price/Production Balancing Act
- Session 2: Changing Patterns for Latin American Crude Movements
- Session 3: Investment in Canadian Supply
- Session 4: Politics, Oil and the Economy
- Session 5: New Access to the Gulf - The Oil Price Relationship for Infrastructure Demand
- Session 6: The Perfect Mix - North American Crude Oil Quality
Our Changing Landscape

- In the last 4 years, US crude oil production is up 35%.
  - Bakken, Eagle Ford, Utica, Permian Basin, Niobrara, Granite Wash...

- There is now more Bakken crude leaving the area by rail than by pipe.

- Gulf Coast crude imports are off 820,000 BPD in the past 12 months.

- Outbound movements at Corpus Christi are skyrocketing.

- The American Association of Railroads announced February 26 that U.S. crude-by-rail shipments in 2012 rose 250 percent over 2011 levels. Despite the higher cost of rail transportation relative to pipelines, steep discounts for domestic and Canadian crudes have enabled refiners with East Coast assets – many previously slated for closure – to keep their plants economically supplied with crude by rail.
Session 1: The Price/Production Balancing Act

Joe Leto, Co-founder and President, EAI Inc., Energy Analysts International
Stephen Bradley, Vice President Oil Marketing, Continental Resources
Stefan Wieler, Analyst, Goldman Sachs
John Auers, Senior Vice President, Turner Mason & Company

John Auers described the US Refining Industry

- Pre 1970 - Balanced; limited crude imports
- Post 1970 - growing imports as US production declined
- 2008 forward - a “U” turn with rising production backing out imports
- The growth is primarily light, sweet grades
Session 3: Investment in Canadian Supply

- **Dinara Millington**, Senior Research Director, Canadian Energy Research Institute
  - Canadian Westbound Crude Exports: New Reality or Wishful Thinking?

- **Ed Koshka**, Vice President Operations, Crude Marketing, E-T Energy
  - Unlocking Over 100 Billion barrels of Stranded Resource
    - The ET-DSP™ process for increased recovery
    - Railing of Undiluted Bitumen

- **Rusty Braziel**, President and Principal Energy Markets Consultant, RBN Energy
  - Condensate Supply and Demand - A Tale of Three Markets
    - A holistic North American picture
    - “Vague product definitions” make assessment of condensate balances difficult
  - Rusty’s daily blog/newsletter is excellent!  http://www.rbnenergy.com/daily-energy-post
Session 4: Politics, Oil and the Economy

- **Dr. Craig Pirrong**, Director, Global Energy Management Institute, Professor of Finance, Bauer College of Business, University of Houston
  - 2013: A Year of Living Dangerously
  - A Global Economic Look and the impacts on the energy industry

- **Sarah Emerson**, President, Energy Security Analysis, Inc.
  - U.S. Tight Oil and the Global Market

- **Gordon Goodman**, Associate, The Alliance Risk Group
Session 6: The Perfect Mix - North American Crude Oil Quality

- Bruce Carlile, Intertek Commodities
  - Crude oil characterization for the “non-technical person"

- Dennis Sutton, Marathon Petroleum
  - Concerns about the blending of incompatible crudes into WTI: What are the evolving standards and specifications for WTI and other key benchmarks? How are refiners evaluating LLS crude oil quality in their specifications? What are the initiatives to enforce stricter controls over value loss from dumbbell crudes?

- Hege Dammen, Spiral Software
  - Managing new grades of Gulf Coast crudes in a changing market
Quality is Viewed Differently by Producers and Refiners

Producers
- Gravity
- Sulfur

Refiners
- Gravity, Sulfur AND
- Light Ends Content
- Boiling Range Distribution (Yields)
- Distillate Cetane
- TAN - corrosivity
- Consistency
- Sulfur Distribution and Composition
- Asphalt Properties
- Nitrogen
- Metals
- Particulates
- No desalter problems
U.S. Refining Impacts

- Average refining crude slate is and will continue to be lighter and sweeter than refinery design

- Refineries are flexible and can make some changes with minimal capital expenditure - within limits
  - Products must be on-spec
  - Safety, environmental stewardship, and permitted limits must be followed
  - Sizes of operating units

- Capital projects will be evaluated to re-optimize on the lighter slate
Crude Oil – Incompatibility
It Can Mean Different Things

- “Incapable of blending into a stable homogeneous mixture” - the most common definition
  - Physical Incompatibility - paraffinic with asphaltic crudes; asphaltene precipitation

- “Unsuitable for use together because of undesirable chemical effects”
  - Significant properties - TAN, cetane number, asphalt characteristics

- Yields - particularly light ends and resid content
Yields - Typical Crude Oil
Yields - Dumbbell Crude Oil
## Yields and Values - Naphtha, Distillate, Gas Oil, Resid

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<tr>
<th></th>
<th>West Texas Sour</th>
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<td>- Residuum (1000°F+)</td>
<td>17.7</td>
<td>20.6</td>
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<sup>1</sup> Based on mid-December prices
WTI Specs - History

- For over 15 years, the concept of more comprehensive specifications on WTI/Domestic Sweet has been discussed.

- In 2005, the Crude Oil Quality Group (now COQA) began working on developing specifications for WTI/Domestic Sweet at Cushing, OK.

- Well-defined sampling and analytical procedures were used in 2009 to analyze 61 Domestic Sweet samples from Cushing.

- In consideration of the above samples, analytical precision and the need for market liquidity, we developed proposed specifications.

- Following a written ballot to all parties, the COQA agreed Executive Director Harry Giles should send a letter communicating the specifications and recommending their adoption.
The Letter - Dated August 10, 2010

To: See Distribution List

RE: Recommended Additional Specifications for Domestic Sweet at Cushing, OK

Dear:

The Crude Oil Quality Association (COQA) www.coqa-int.org is a petroleum industry technical organization comprised of members representing refiners, pipeline companies, terminal operators, chemical and service companies, and commercial laboratories. The association is dedicated to the belief that maintaining the quality and integrity of the refining characteristics of crude oil streams is of importance to all parties from production to the refinery. As such, we have been addressing crude oil specifications for more than a decade. The Refiners Crude Oil Quality Group, predecessor of the COQA, was responsible for the successful adoption of the LLS specifications over 20 years ago.

Consistent with our mission and its studies spanning more than five years, COQA has identified key parameters that more comprehensively describe Domestic Sweet crude oil delivered at Cushing, OK (NYMEX Light Sweet Crude Oil Futures). It has defined the analytical test procedures to be used to measure these parameters, has reviewed historical and current quality data for these, and recently reached consensus on the additional specifications shown in the following table.

These additional specifications will provide greater confidence in the quality of Domestic Sweet for all who physically process this grade, as well as those who transact futures and delivery contracts. With this more comprehensive definition of the quality of Domestic Sweet, there will be a higher level of reliability and flexibility of this very important benchmark crude oil.

As part of the detailed statistical analysis...

The COQA recommends the immediate adoption of these specifications as part of the NYMEX Light Sweet Crude Oil Futures Grade and Quality Specifications (Section 200.12) (A), and in the operating procedures of the pipeline and terminal facilities at Cushing. The existing quality specifications for sulfur, gravity, viscosity, Reid vapour pressure (RVP), density, salt and water (BS&W, 2011),...
Implementation

- The development of more comprehensive specifications that better define Domestic Sweet is built on proven, established practices.
  - LLS Specifications
  - Existing NYMEX specifications for gravity, sulfur, pour point, viscosity, RVP
  - Actual testing

- While 2011 and 2012 batch data indicates the COQA specs are being followed, they have not yet been formally adopted by NYMEX.

- Based on discussions with NYMEX, we are optimistic of their adoption and publication in 2013.
Conclusions

- **Boom, Base Load or Bottleneck?**
  - From a quality standpoint, the answer is Yes
    - Boom – similar to historical quality
    - Base Load - definitely
    - Bottleneck - Light Ends, Yields, Physical Incompatibility

- **A Challenge** - Further development and adoption of meaningful crude specs

- **Overall- An Excellent Conference!**