North American Crude Outlook
Where We Are Today

- Crude imports
  - How low prices have changed the trend from recent years, and expectations for the future
- Crude exports
  - What will it take for US exports to gain momentum?
- US production
  - Price sensitivity and when US production growth will come back
- Domestic and global inventories
  - What do they say about the state of the market, and the speed at which the recovery is taking place?
- Where does the US producer fit into global supply curve?
- Demand
  - With supply responding to low prices, will demand hold up its end of the bargain?
- Prices
  - How it all adds up and the outlook going forward
Onshore US Production Has Fallen by 900 Mb/d Since January 2015

Cumulative Production Change

Source: Platts Analytics – Bentek Products

S&P Global Platts
In August, OPEC Production Was Up Nearly 1 MMb/d Year on Year

OPEC YoY Change

Source: Platts Analytics - Survey
Non-OPEC Non-US/Canada Production Has Also Been Sensitive to the Low Price Environment

Source: Platts Bentek, EIA
The Near-term Picture For US Production
At Status Quo, Production Roughly Flat Through 2018

Projection – Total US

Source: Platts Analytics – Bentek Products

S&P Global
Platts
Low Prices Are Moving the Market Toward Balance, but Platts Expects Subdued Pricing in the Near Term

Forecast – Dated Brent

Source: Platts Analytics' Bentek Energy

S&P Global Platts
$50+ WTI Warrants Increased Drilling

**IRR sensitivity to WTI**

*WTI Sensitivity: WTI prices are adjusted while regional oil differentials are locked in at current spreads*

*Natural gas remain at current 12-month forward curve prices for their respective regions*

*The relationship between the NGL and Oil prices are held constant when calculating the oil breakeven price*

*Source: Platts Bentek*
Rig Count Remains Sensitive to WTI

![Rig Count vs. WTI Price](source: RigData, Nymex, Platts Analytics' Bentek Energy)

WTI Price (3 months lagged) — Oil Rigs

Source: RigData, Nymex, Platts Analytics' Bentek Energy
DUC Inventories are Beginning to Decline, with Texas and Colorado Leading the Reduction

Horizontal Drilled but Uncompleted Wells

Source: Rig Data; Drilling Info; Platts Analytics Bentek Energy

- Alabama
- Arkansas
- California
- Colorado
- Louisiana
- Montana
- New Mexico
- North Dakota
- Oklahoma
- Texas
- Utah
- Wyoming

S&P Global
Platts
Increasing Oil Prices Will Enable US Production to Rebound, with Shale Leading the Charge

Forecast – Crude Oil

Source: Platts Analytics’ Bentek Energy
Production From Shale Basins will Begin Trending Upward Again in Early 2017

Forecast – Crude Oil

Source: Platts Analytics – Bentek Products

S&P Global
Platts
But will the market balance?
Narrow WTI/Brent Spread Has Contributed to Higher Imports

Source: Platts Analytics’ Bentek Energy
Refined Product Inventories Must Normalize Before Crude Inventories Can Be Consumed

Source: Bentek, S&P Global Platts
US Product Inventories Remain Uncomfortably High

Refined Product Stocks
Difference to 5-Yr Ave. Days Forward Cover

Source: EIA
Stocks Will Draw, but Not to Typical Days Forward Cover Level

US Crude Stocks (excl. SPR)

Source: EIA, Platts Analytics
The Balance Will Allow for High Stock Levels to Finally Start Drawing Down

US Balance
(MMb/d)

Supply
Demand
Balance

S&P Global Platts
And what about the global market?
Countries/Companies Are Still Reporting Plans to Increase Production During 2017

Global YOY Production Changes

Source: Platts Analytics
The Global Reporting Groups Have Become Much Less Optimistic About When the Market Will Balance

Supply and Demand Balance

Source: IEA, EIA, OPEC
There Are Also Many Vessels Full of Crude that Have Been Idle for More than 30-Days

June: 24 – 25 MM DWT
Sept: 39 – 40 MM DWT

Source: Platts Analytics
Capex Cuts Now Will Impact Future Production Growth

Quarterly Capital Expenditures

Source: Capital IQ
Flat OPEC and declining non-OPEC/US/Canada supply could lead to very short market

Global Supply/Demand Scenario Forecast

Supply – Demand (2021) -5.7 MMb/d

S&P Global Platts
Platts Analytics Continues to Expect Subdued Pricing in the Near Term, with More Support in Latter Years

Forecast – Dated Brent

2021 Average
$78/bbl

Source: Platts Analytics’ Bentek Energy
Weaker GDP Growth Remains a Substantial Risk
Key Takeaways

• Low prices are reducing the oversupply, but further balancing is needed
• US production is expected to begin growing modestly late next year, despite prices remaining subdued
• Crude oil inventories in the US will move toward more comfortable levels during 2017
• Higher prices will be needed in the future to incentivize production growth
• Demand growth continues to be a substantial risk to prices recovering
Questions?

Thank you!

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