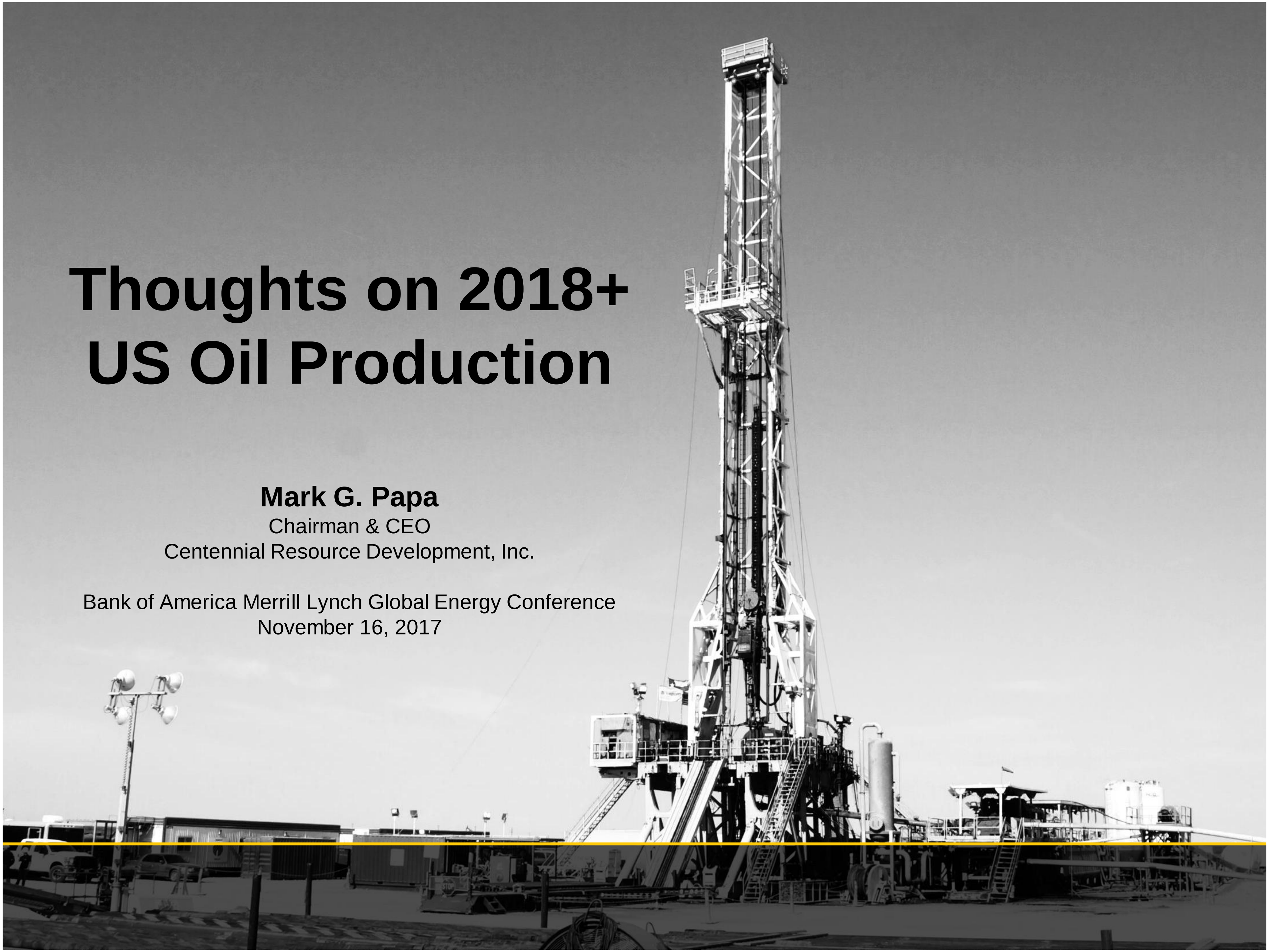


Thoughts on 2018+ US Oil Production

Mark G. Papa
Chairman & CEO
Centennial Resource Development, Inc.

Bank of America Merrill Lynch Global Energy Conference
November 16, 2017

2018+ Oil Market

Conventional Wisdom

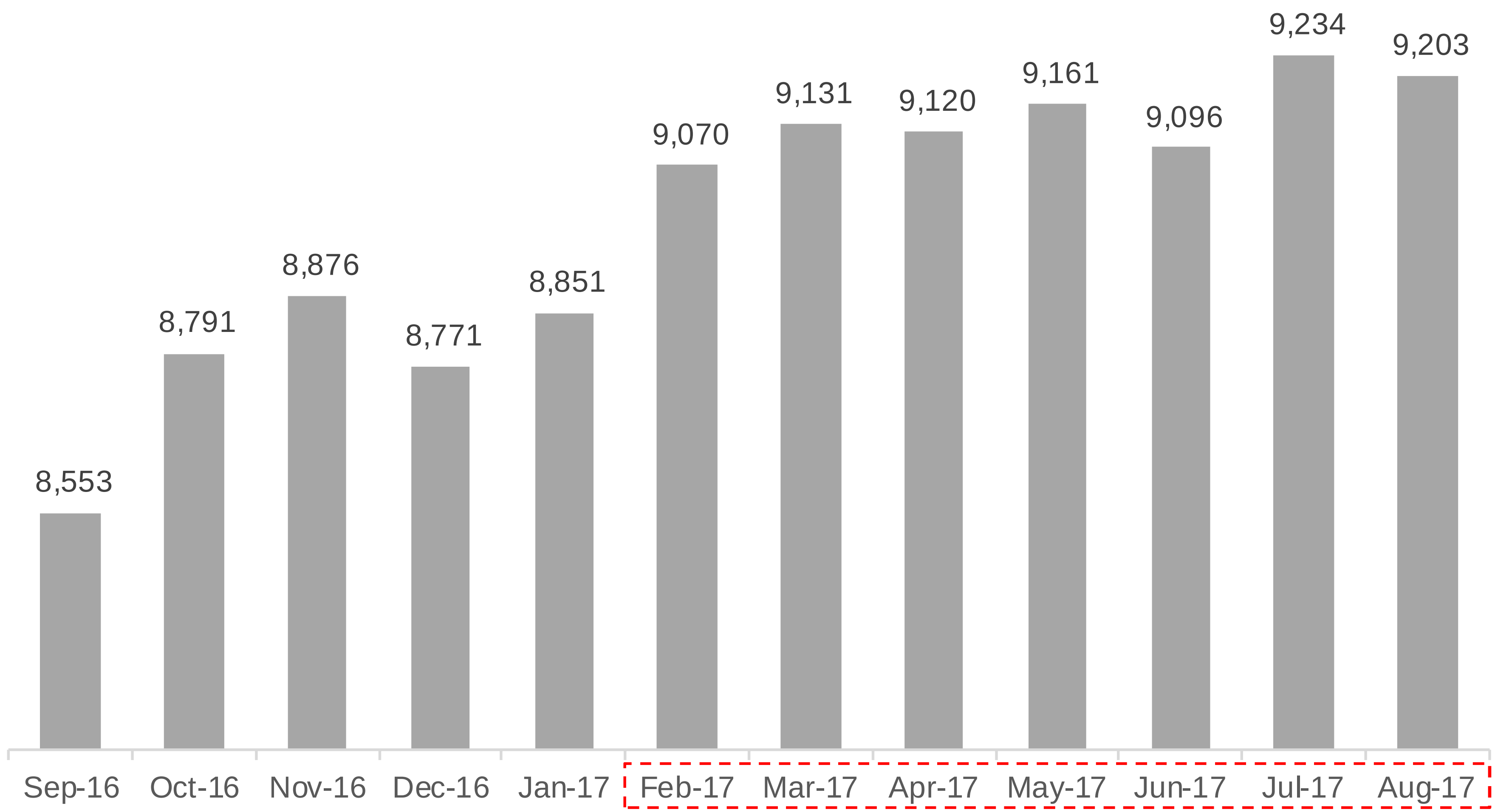
- No matter what OPEC does, the US shale machine will counter OPEC's action, flood the market, and prices will stay low forever
- E&P's have created the impression that US shale oil supply has no upward limits
    - Every company has thousands of locations
    - Implied technical improvements proliferate
    - Breakeven costs advertised to be heading toward $0 / Bbl
    - 64 wells / section advertised in some areas
- But, what if US shale oil is no longer the "Big Bad Wolf"?

Items Where There's No Disagreement

- 2013-2017 global oil demand has surpassed to the upside every year for 5 years – 1.6 MMBD this year
- A major determinant of future oil prices is the rate of US oil growth
- 2017 YOY US oil growth has been lower than expected ~330 MBD vs early predictions of ~600 MBD YOY
- US production has been essentially flat for the last 7 months

Total US Crude Production Has Been Essentially Flat For the Past 7 Months

US Crude Production (MBPD)



Source: U.S. Energy Information Agency

Mark's Perspective – 2018+ US Oil Growth

- Currently a minority opinion
- Even in a constructive oil price environment, US oil growth will be more tepid than most people are predicting
- Reasons for tepid growth:

  Primary:

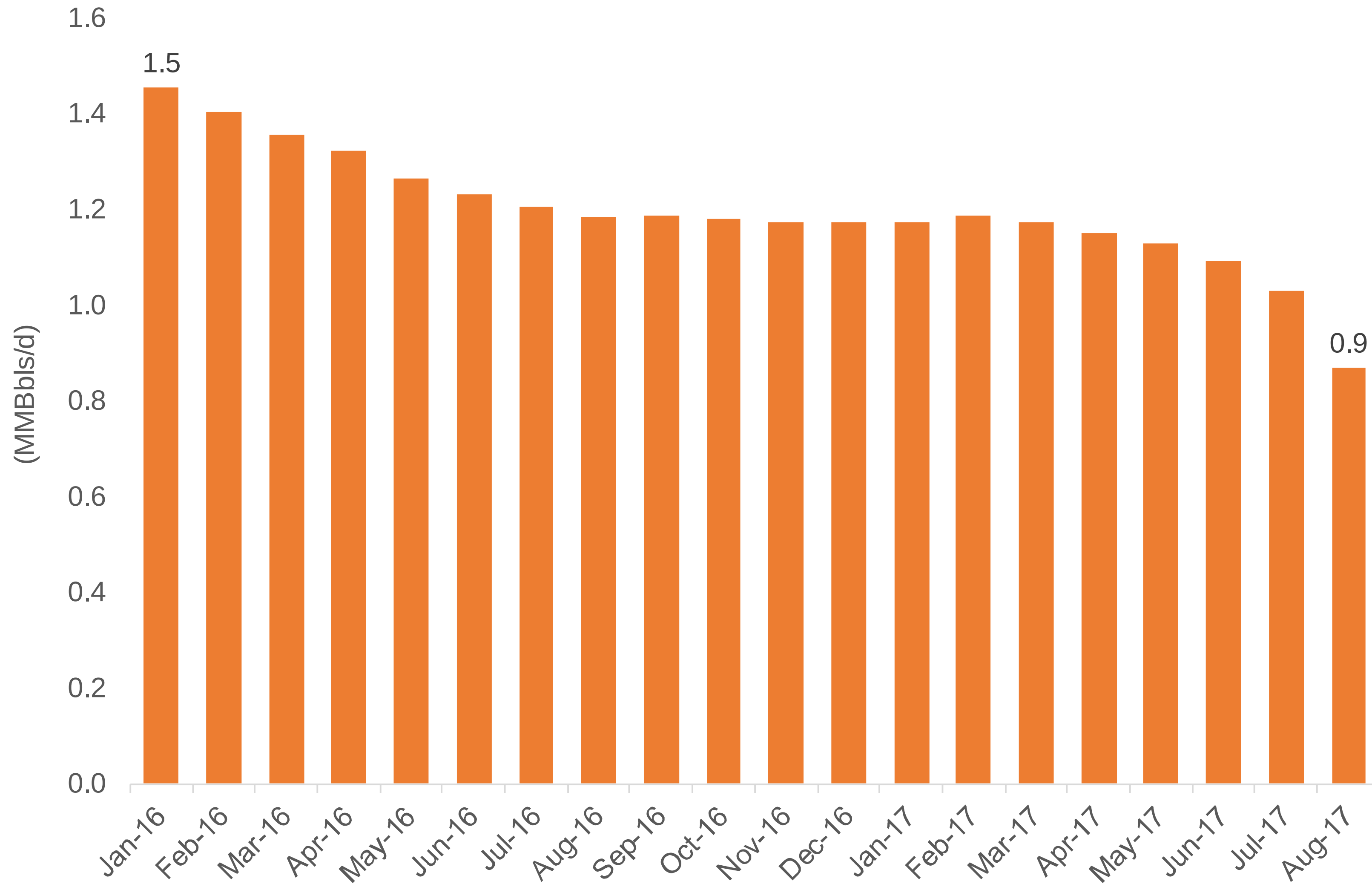
  - Lack of remaining Tier 1 geologic quality drilling locations in the Bakken and Eagle Ford

  Secondary:

  - Net GOM YOY declines beginning in 2019
  - No new substantial resource plays to augment the Bakken and Eagle Ford (Scoop/Stack, Niobrara are localized combo plays)
  - Cash flow limitations and (perhaps) some degree of value over volume discipline among independents

Eagle Ford Liquids Production

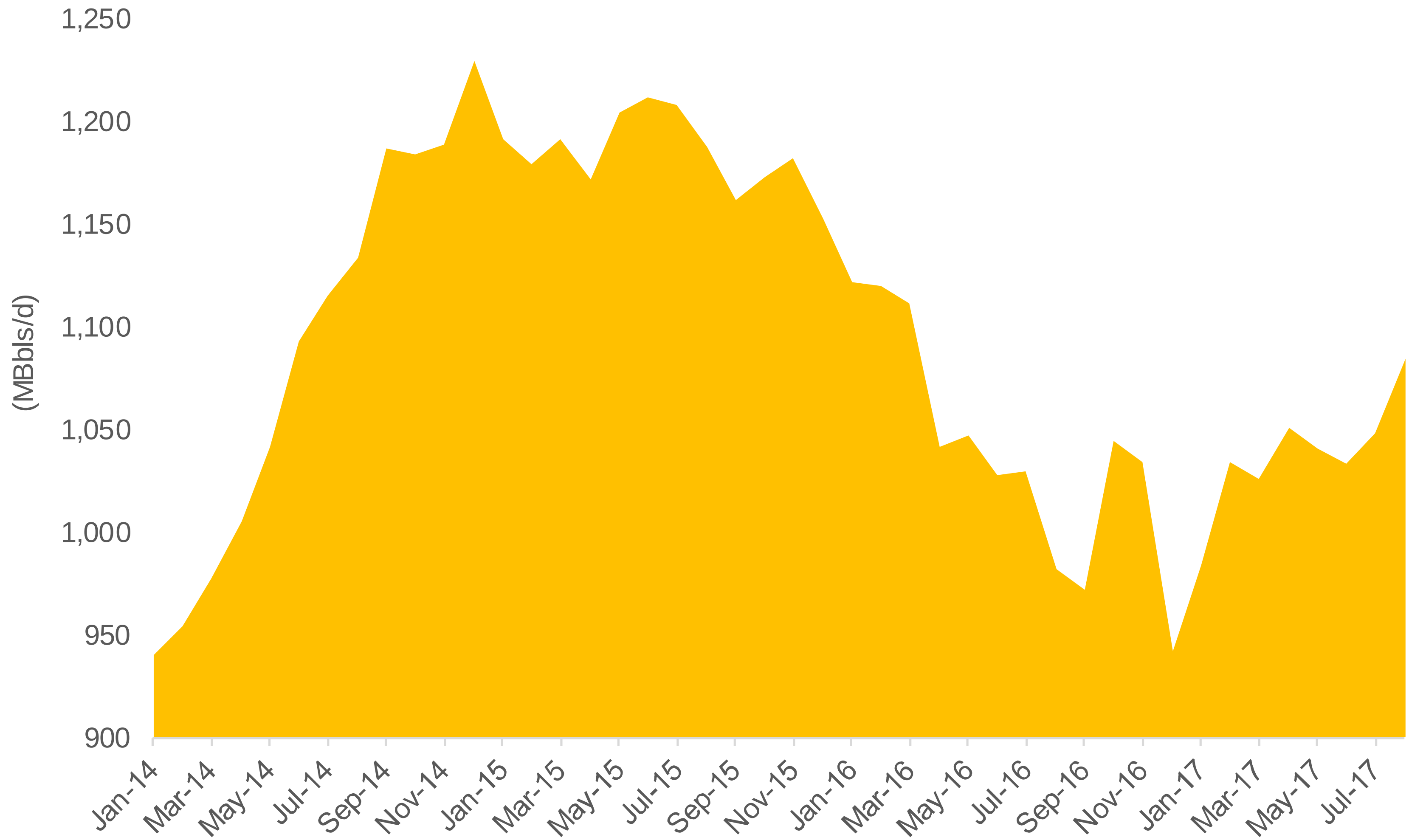
Jan. 2016 – Aug. 2017



Source: Texas Railroad Commission and CIBC World Markets, Inc.

North Dakota Oil Production

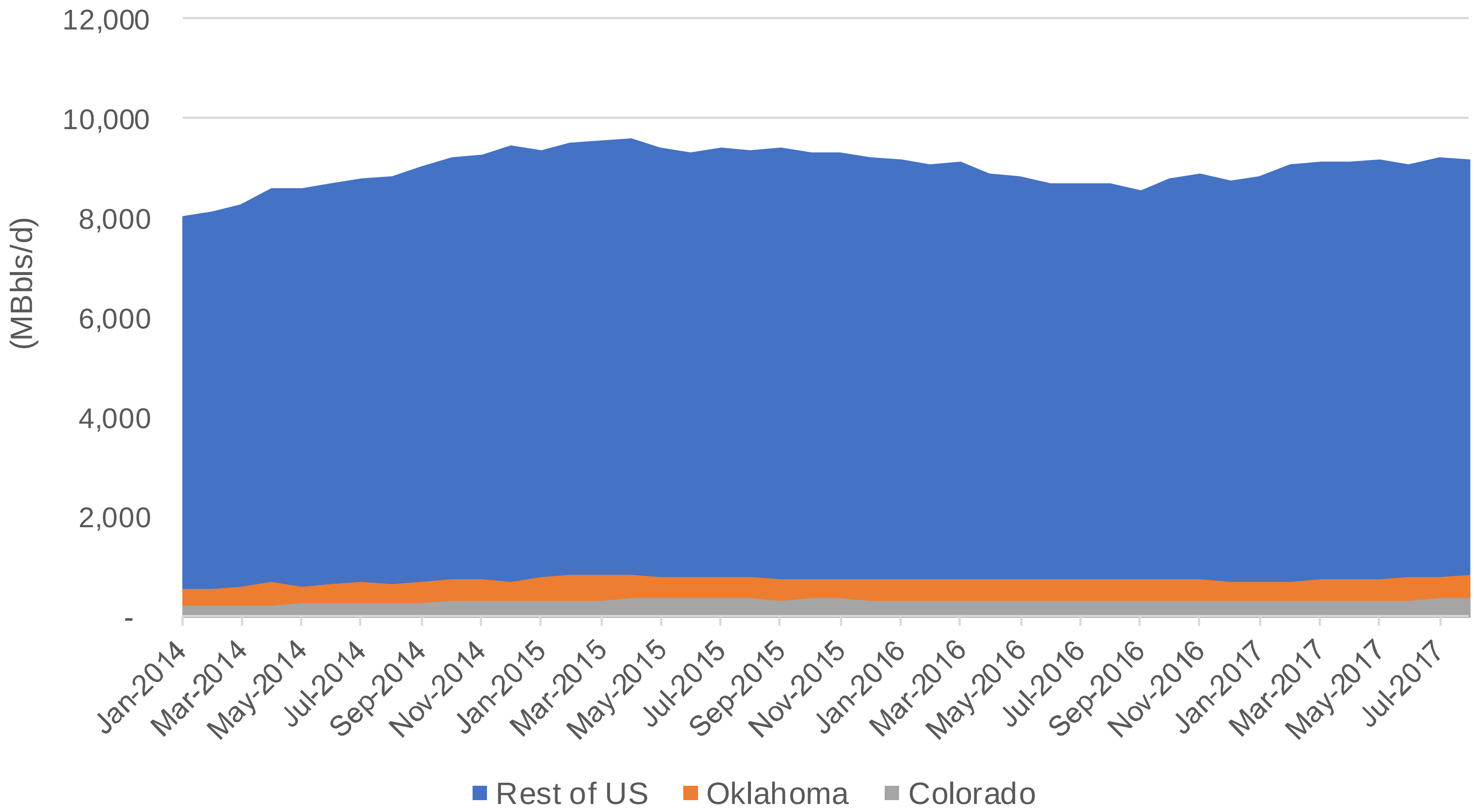
Jan. 2014 – Aug. 2017



Source: North Dakota Department of Mineral Resources.

Scoop / Stack and DJ Basin are a rounding error on total US oil production and are primarily NGL plays

US Crude Production (Jan. 2014 – Aug. 2017)



Source: U.S. Energy Information Agency

CENTENNIAL

Growth Prediction

In a constructive oil price environment, total 2018+ US growth will be 600 – 750 MBD/yr. vs current predictions of 1.4 – 1.6 MMBD/yr. and demand growth of 1.2 – 1.4 MMBD/yr.

Basis For This Prediction

- EIA monthly data is telling us something
- The GOM turnaround is inevitable
- A large portion of the Tier I Bakken and Eagle Ford acreage has already been drilled – approximately 70%
- There’s a steep drop-off in oil output/well between Tier 1 and Tier 2 geologic quality
- Completion technology improvements can’t cure bad rock

What To Expect In 2018+ In A Constructive Oil Price Environment

- Bakken and Eagle Ford will grow from present levels – but much less than expected

- The Permian will be the only substantial US growth driver – and its growth won't reach the high side predictions

- The GOM YOY growth will end in late 2018, then multi-year declines will begin

E&P's Have Created The Illusion that All Shale is Equal Quality

- Shale is like any other rock – the quality varies
- An additional factor is the phase window
- Much remaining inventory is Tier II or III geologic quality
- Down spacing and multizone potential likely overstated
- The Permian has the same rock quality and phase issues as the Bakken and Eagle Ford – it's just less developed to date

Early Evidence of This Trend is Already Apparent

- EIA Monthly Data
- Eagle Ford write-downs attributable to tight spacing
- Multiple volume misses in 3Q

A Word About Shale Completion Technology

- This is a bricks and mortar business, not silicon valley. Our output is hydrocarbon molecules, not data bursts

- Initial shale completion improvements were so rapid (and phenomenal) because the industry started from a zero knowledge base. Future improvements will be incremental

- Big data will help only marginally

Conclusions

- US oil production will grow, but only at about half the rate currently predicted
  - Corollary: WTI will have to be very high to stimulate US growth of 1.2-1.4 MMBD/yr.

- Even so, by 2020 the US will be essentially tied with Russia and Saudi Arabia as the world's biggest oil producer

- Expect a very tight global oil S/D when the market concludes that US shale isn't the "Big Bad Wolf" that it used to be

Things That I'm Not Saying

- US production growth has essentially stopped
- Shale oil extraction technology improvements have ended

2018 Items to Monitor

- EIA Monthly Data
  - Expect to see monthly growth – not flat as in past 7 months
  - Expect 600-700 MBD/yr. annual growth rate
- E&P's 2018 oil growth forecasts
- Hints of slowdowns in rates of completion improvements
- Changes in down spacing or multizone assumptions

Centennial Resource Development, Inc.

- Unhedged, oil weighted Delaware Basin pure-play
- Highest 2017 – 2020 oil CAGR of any public E&P
- Very low debt
- Best midcap shale development technical team
- Focused on GAAP ROE’s / ROCE’s