



Oil Industry Segment Update

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**Rail Energy Transportation Advisory Committee
Surface Transportation Board**

October 19, 2017

US Crude Oil Market Environment

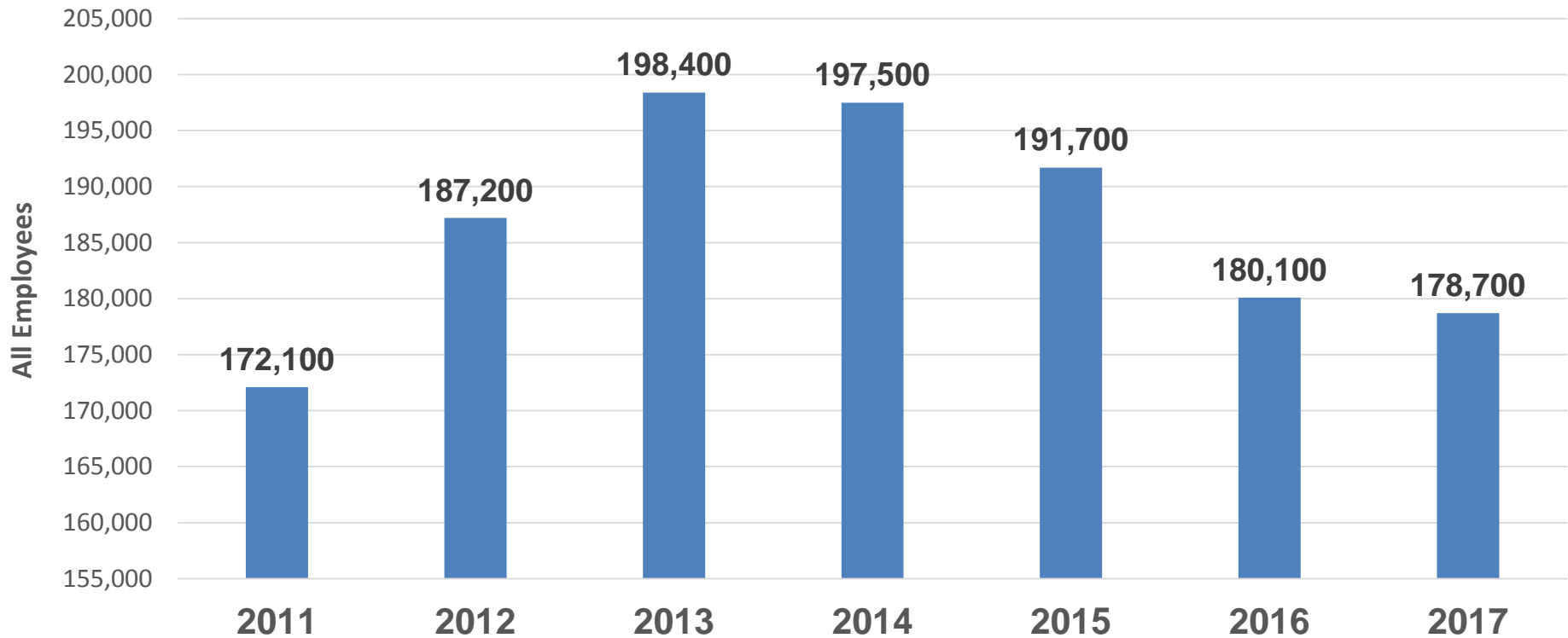
- **Global crude oil inventories remain at high levels** [Source: EIA Weekly Report]
- **Prices remain relatively low and volatile**
 - **Cushing WTI Spot Price** [Source: EIA Daily Reports]
 - October 6, 2014 = \$90.33
 - October 5, 2015 = \$46.28
 - October 3, 2016 = \$48.80
 - October 2, 2017 = \$50.59
- **US land rig count down 53.1% from 2014 peak** [Source: Baker Hughes]
- **US land rig count increased 18% from 7/'15 to 7/'17** [Source: Baker Hughes]
- **US production declined (-1.7%) from 7/'15 to 7/'17** [Source: EIA]
- **Current economics favor pipe over rail** [Source: RBN Energy]
- **CBR volumes have declined to early 2012 levels** [Source: EIA]
- **US crude oil exports at 1.98 million bpd 9/29/17 week** [Source: Reuters]
- **US crude imports at 756K bpd 9/29/17 week** [Source: Reuters]
- **Brent WTI spread at \$5.35 9/29/17** [Source: YCharts]

Land Oil Rig Count

| Region | 2014 Peak (October) | October 7th 2016 | October 6th 2017 | Count '16/'17 Change | % '16/'17 Change | % Change From Peak |
|------------------|--------------------------|------------------|--------------------------|----------------------|------------------|--------------------|
| US | 1,609 | 428 | 748 | +320 | +75% | -54% |
| Eagleford | 206 | 32 | 62 | +30 | +94% | -70% |
| Permian | 35% of US 562 | 203 | 51% of US 383 | +180 | +89% | -32% |
| Williston | 198 | 30 | 50 | +20 | +67% | -75% |
| All Other | 637 | 128 | 253 | +125 | +98% | -60% |

Source: Baker Hughes

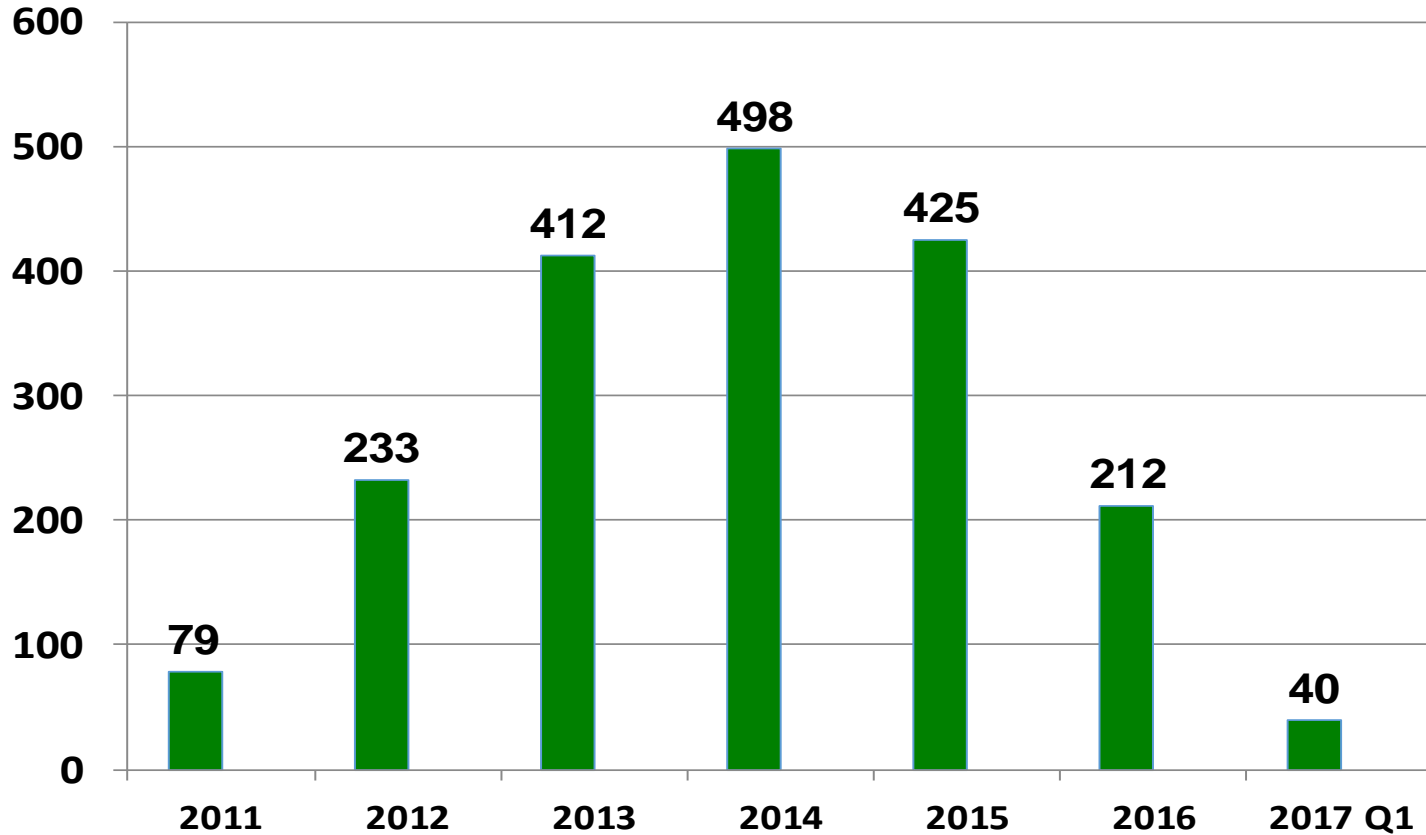
Oil and Gas Production Average Annual Employment (Seasonally Adjusted)



Source: U.S. Bureau of Labor Statistics

Volume of Crude by Rail Carloads

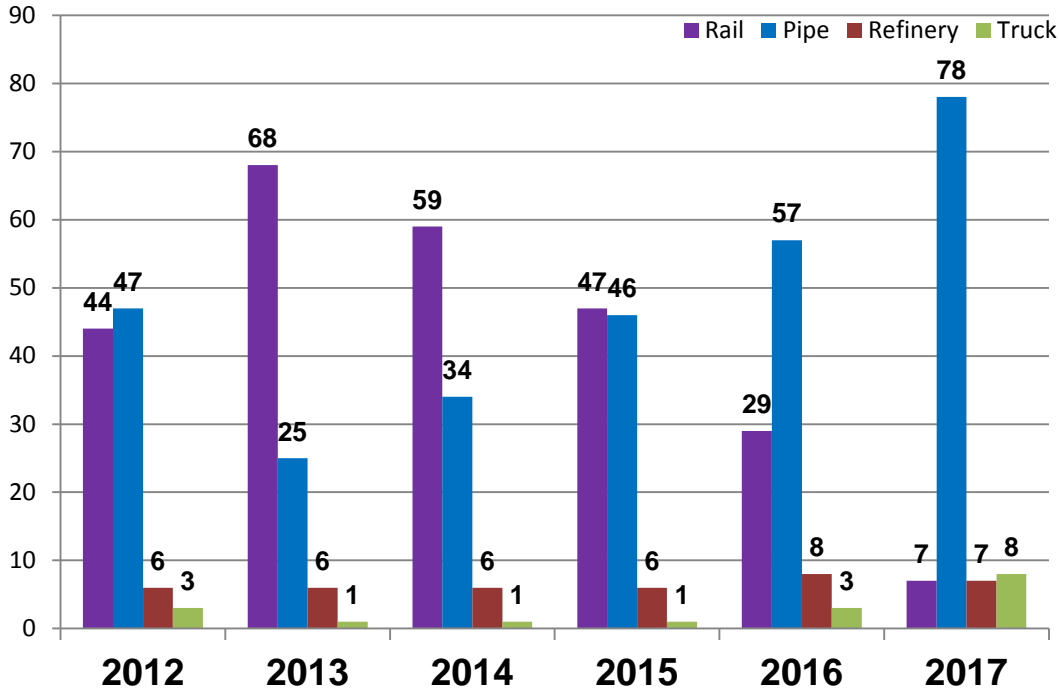
Originated Carloads on US Class I Railroads (1,000's)



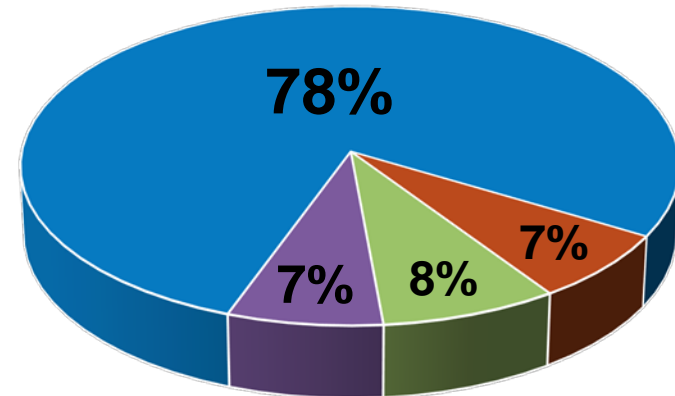
2017 1Q
was the
lowest 1Q
volume
since 2012
[Source EIA]

Source: AAR

Williston Basin Crude Oil Modal Share

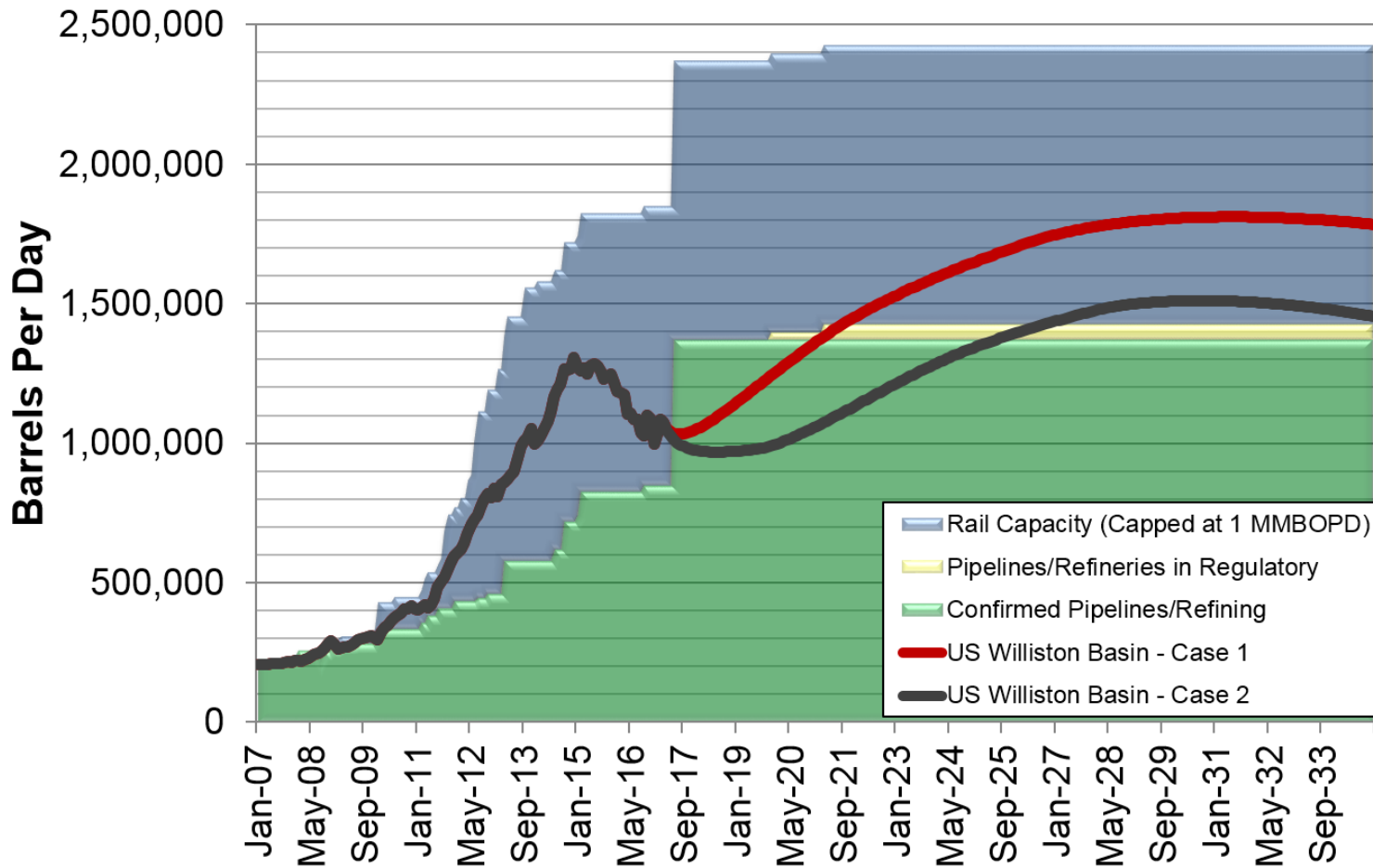


June 2017 Estimated



| | Average Production/BOPD | Rail/BOPD est. |
|--------|-------------------------|----------------|
| 6/2013 | 521,598 | 354,687 |
| 6/2014 | 1,092,519 | 644,586 |
| 6/2015 | 1,211,328 | 569,324 |
| 6/2016 | 1,027,131 | 297,868 |
| 6/2017 | 1,032,873 | 72,301 |

Williston Basin Crude Oil Production and Export Capacity, BOPD

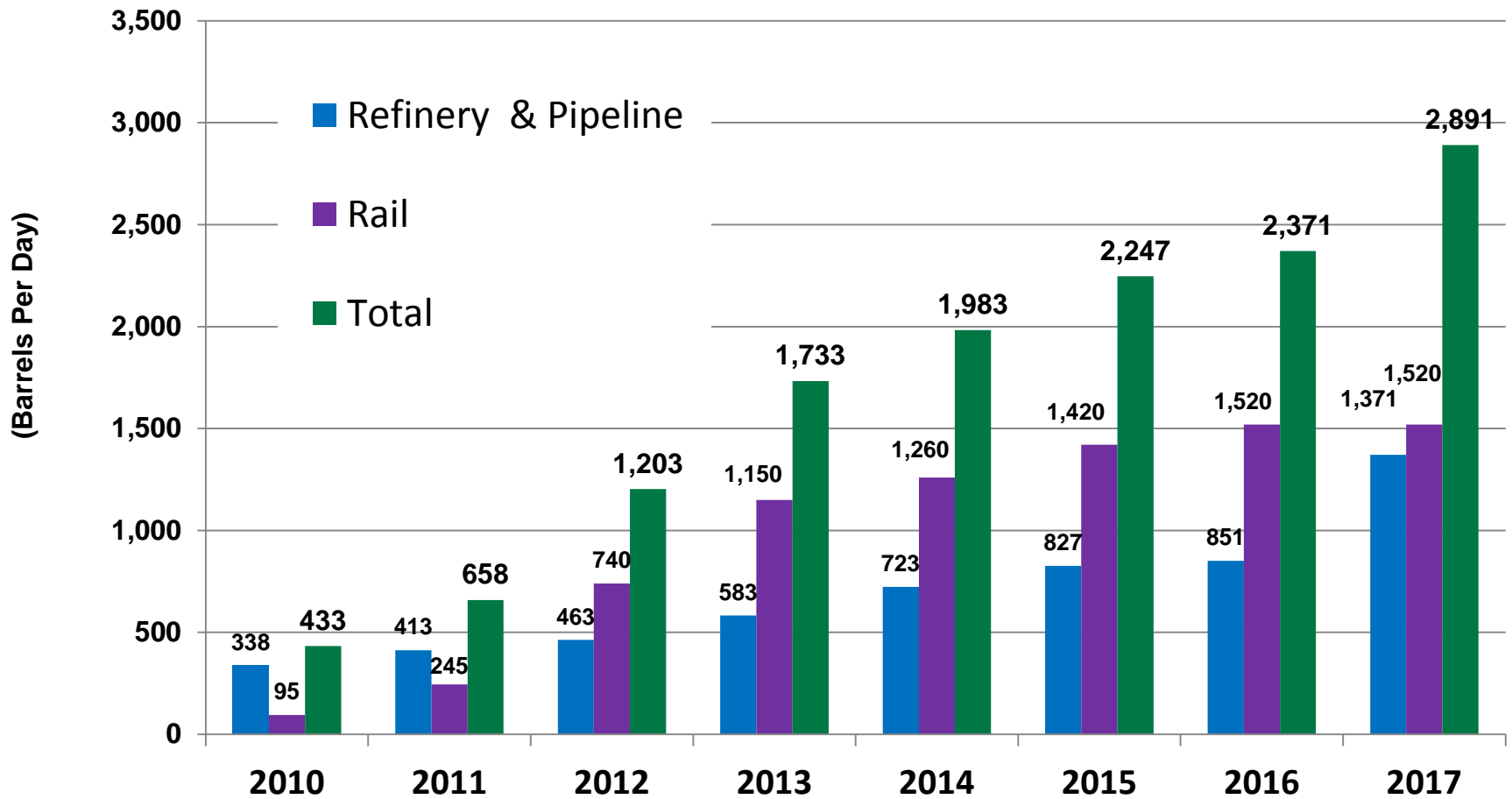


Note:
DAPL
volume at
470,000
BPD
 [Source: API]

Source: North Dakota Pipeline Authority

Williston Basin Crude Oil Export Options

(Reported Capacity – Not Market Share)



Rail: Loading terminal capacity/not railroad; NDPA assumes rail capacity at 1 MMOBD

Some Closing Thoughts

- **US crude oil production has declined since 2015 but it is steadily continuing a gradual recovery; 9.238 million BPD July 2017**
- **Most rapid onshore production growth is in the pipe centric Texas**
- **Bakken production level at 1 million BPD+**
- **The marketplace continues adapting to the effects of high global inventories, instability and low price levels**
- **US unconventional oil producers continue responding to market realities with an efficiency/productivity focus**
- **July 2017 CBR volume has fallen to March 2012 levels**
- **Surplus capacity remains in the CBR marketplace**
- **Growing crude oil exports could be a potential plus for CBR**
- **Increasing Brent WTI spread could be a potential positive for CBR**