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Upstream Market Overview

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April 21, 2016

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Market Dynamics and DUCs

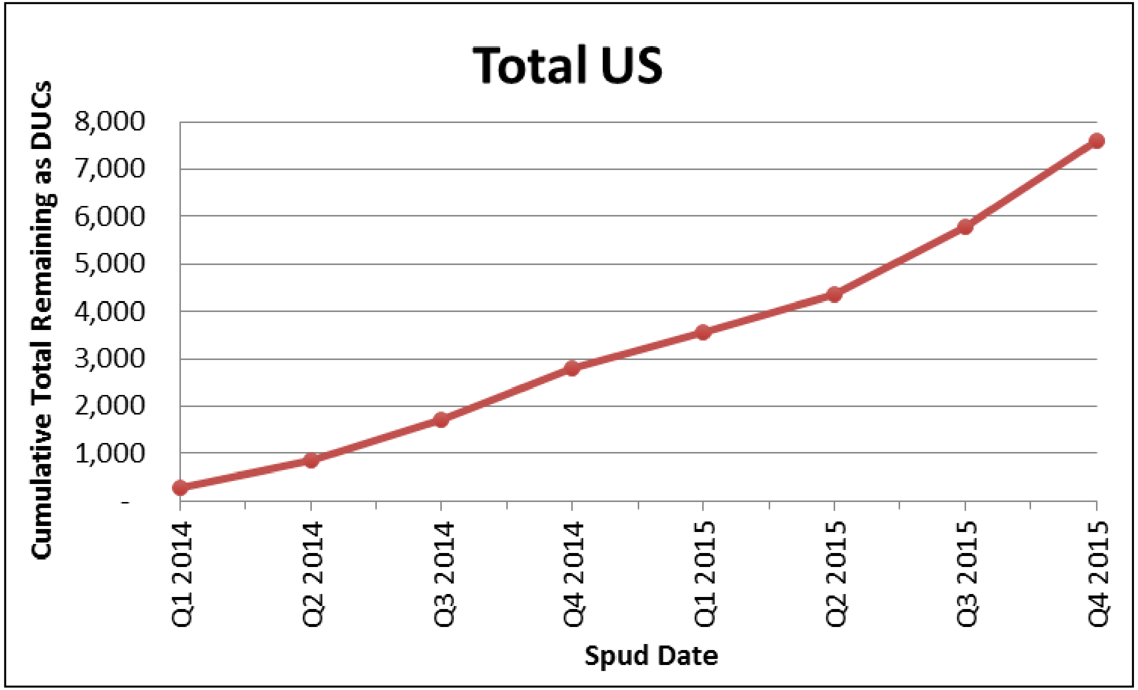
What is driving the current market structure and how have DUCs evolved?

- Operators are basically in survival mode and doing everything they can to maintain going concerns
- While waiting for prices to rebound, controlling costs is the name of the game
  - Rig rates have been declining, and day rates have been dropping
  - With respect to drilling strategy, the two key areas of control relate to completions
- DUCs
  - The inventory of drilled but uncompleted wells has grown throughout the US since early 2014:
  - Since Q1 2015, the average amount of DUCs in the US increased by 128%.
  - In 2014, DUC inventory averaged 1,409 in the major basins. In 2015, that average increased to approximately 5,332, increasing 171%.
- Refracs
  - Operators are clearly moving to control costs in this area
    - Proppants: Sand providers are reaping the benefit of operators making material movements to sand only or sand + resin proppants
    - Completion types: The primary methods for completion have been moving to the cheapest alternatives → Slickwater and Crosslink

Market Dynamics of DUCs

Tracking DUCs Across Basins

How many DUCs are there and how has it changed?



- From Q1 to Q2 2014, the US saw an increase in its DUC inventory by almost 213%.
- At the end of 2014, there were approximately 2,803 total DUCs in the major basins and by Q1 2016 the US had an inventory of 8,150 DUCs, an increase of almost 200%.
- Out of the total DUC count at Q1 2016, the US added 1,830 new DUCs in its inventory between Q4 2015 and Q1 2016..
- Outside of the Appalachian region relating to transportation constraints, the majority of DUCs have grown within the oil/liquids producing regions such as the MidCon area, the Gulf Coast, and the Permian. North Texas has also seen an increase in its DUC inventory by almost 173% in early 2014.

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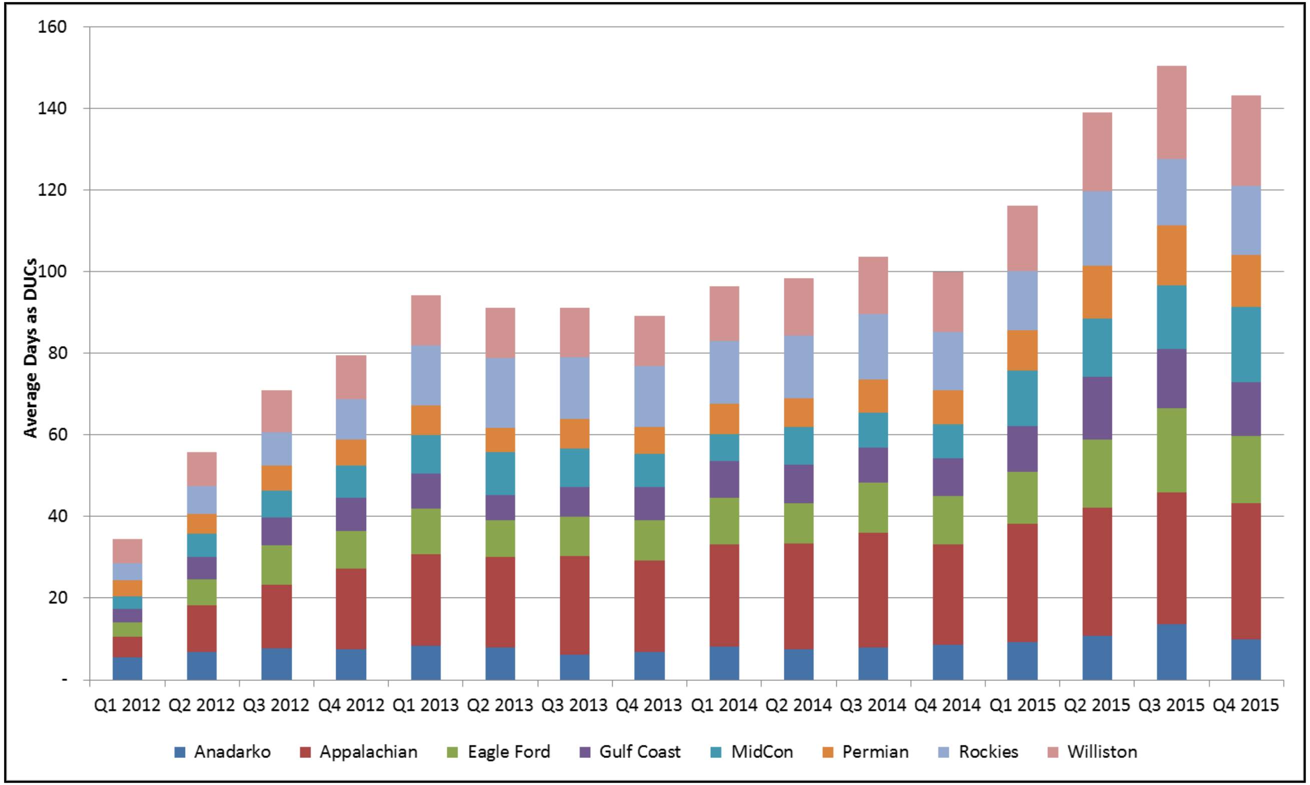
Tracking DUCs

How long are they DUCs?



- Since early 2012, the profile of DUCs has changed drastically. Throughout 2012, wells did not remain a 'DUC' for long, averaging 60 days uncompleted.
- In 2013 and 2014, we notice a stabilization of wells where the average amount of days hovered at 95.
- Between Q4 2014 and Q1 2015, the average amount of time that a well spent uncompleted increased by 16%. By year-end 2015, this average increased to 43%.

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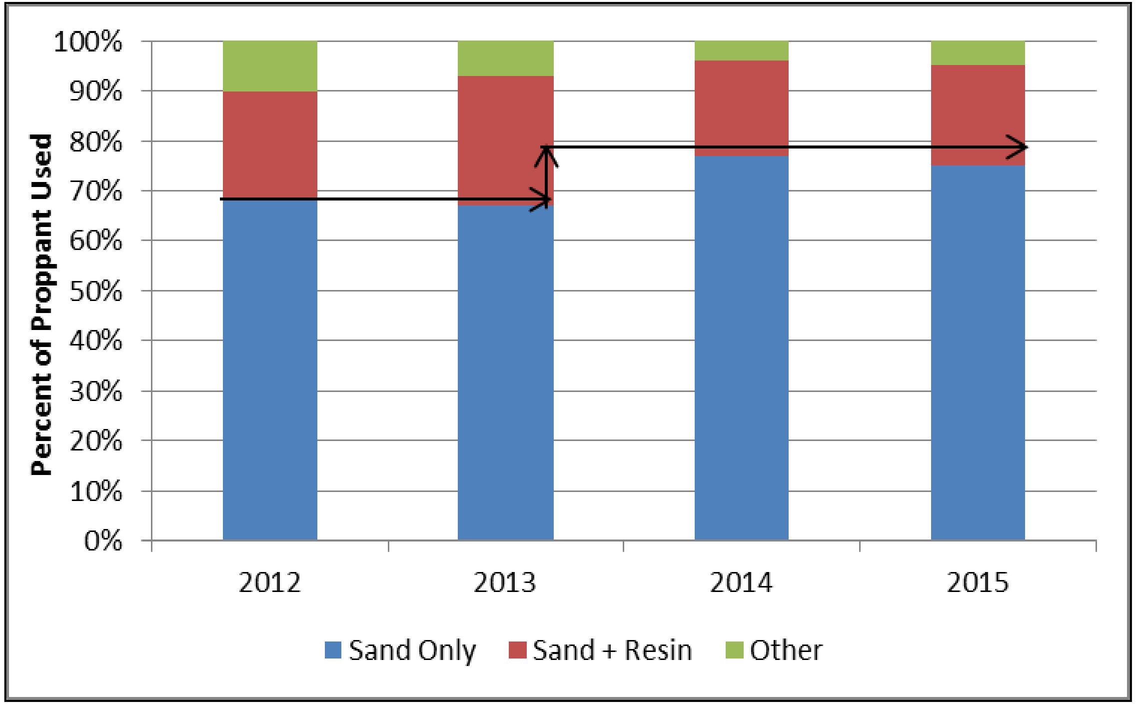
Refracs in the Current Market

Completion Trends Across the US

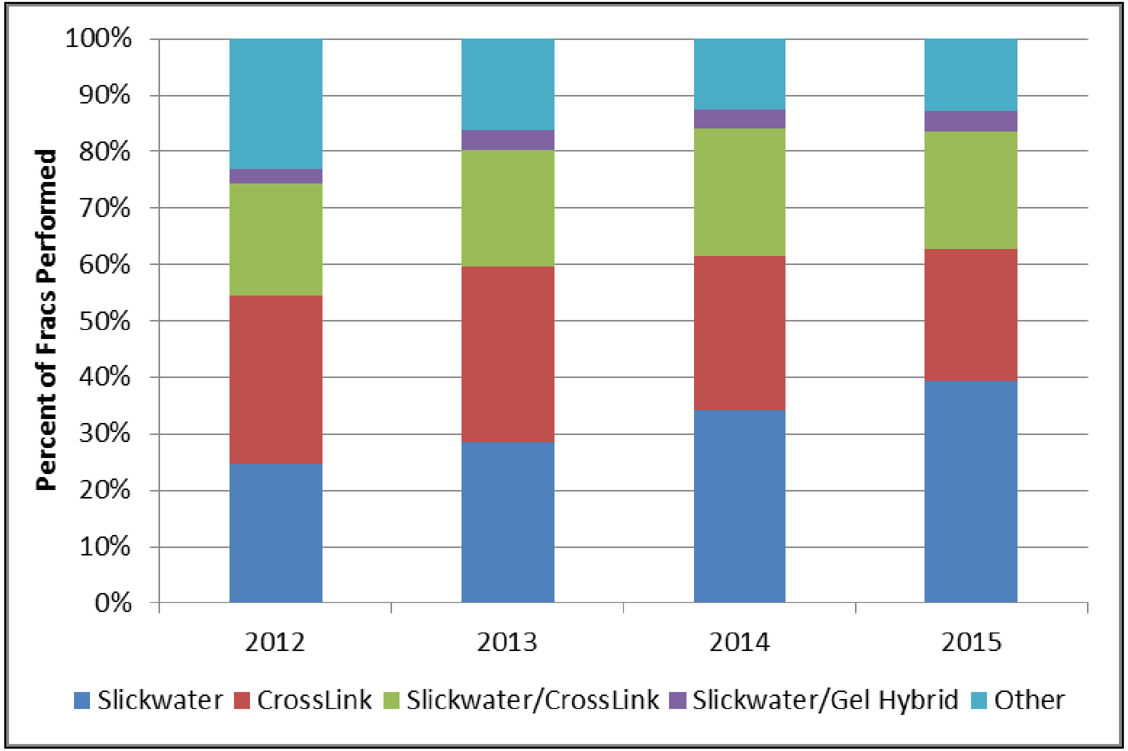
Proppant Type



- Two main types of proppant have dominated the industry since 2012: Raw sand and sand with resin (resin coated sand)
- The average trend of raw sand use stayed relatively similar between 2012 and 2013 at approximately 68% of the market share for the major basins.
- In 2014 when prices began to become depressed, the industry saw a greater push toward raw sand usage and less toward other options.

Completion Trends Across the US

Frac Job Types



- Slickwater fracturing has continuously increased since 2012 and has typically been used for cost cutting measures, however, multiple operators have also attributed higher IP rates and shallower declines to the use of slickwater fracs.

- CrossLink fracturing was dominant in the industry for oil or high liquid wells from 2012 to 2014 but has been decreasing since 2015.

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Activity Forecast

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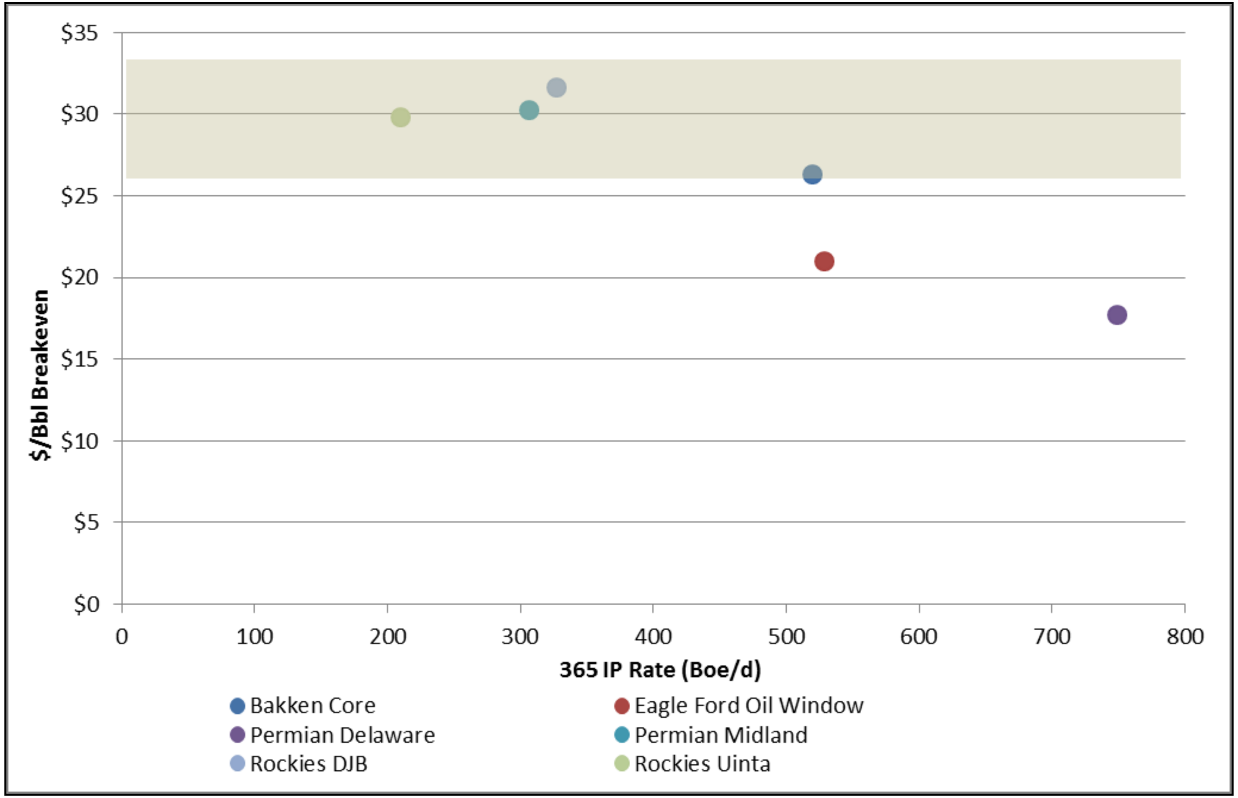
Performance of Top 20% of Wells



- Towards the end of 2015, Some in the industry reported prices upwards of $60/bbl. We believe that the overall average will hover around $30/bbl.
- Operators have religiously discussed increasing well efficiencies and lowering the overall costs to drill.
- When comparing the top 20% of wells within top basins, we believe operators can make decent returns around $30-40/bbl .
- While there are many wells that do not fit this top tier production profile, operators have made shifts to focus on top-tier acreage and will be high grading new wells to these areas.

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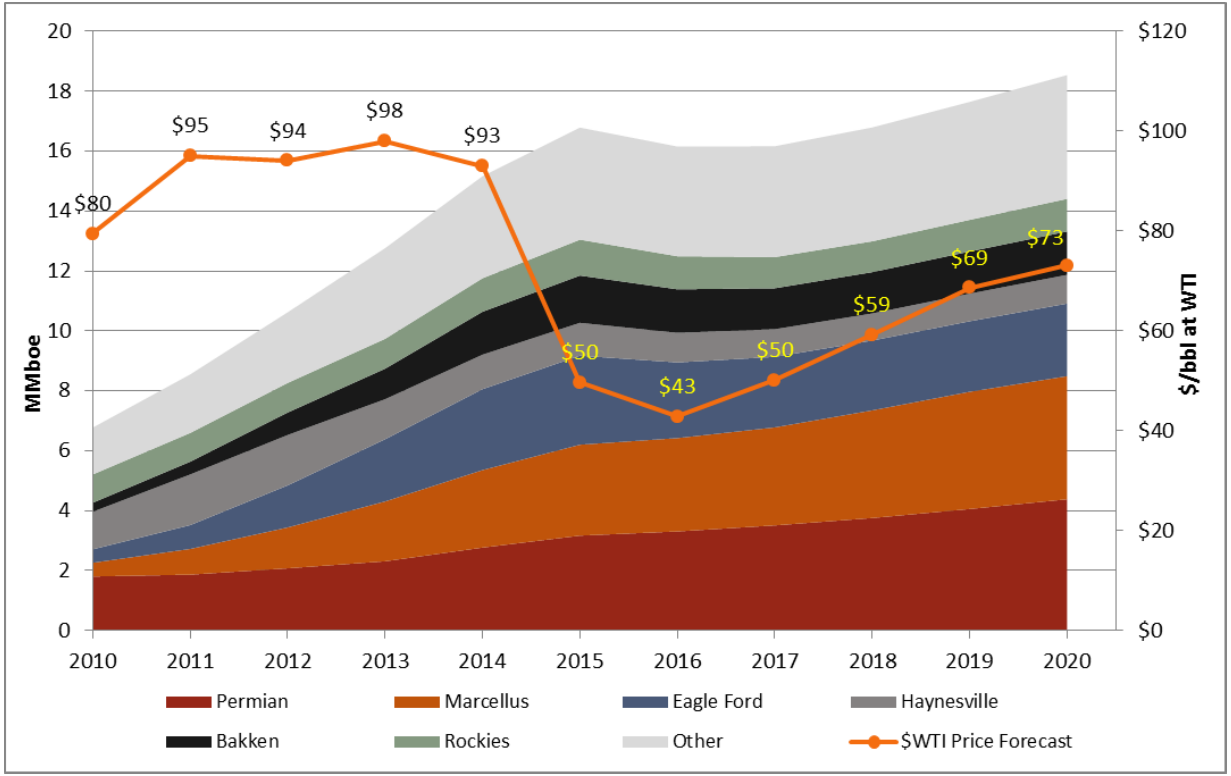
Conclusions: Production Forecast and Outlook



- Further exemplifying the ability of operators to achieve more productive well results and lower costs, we believe the markets will stabilize within this ‘comfort’ zone of oil price.
- Operators will be able to increase production rates by optimizing their capital budgets through the completion of DUCs within their inventory.
- Through refracturing of existing wells, operators can continue to achieve high IP rates with minimal investments over the near term. This will also allow for increased production while maintaining more conservative cost structures.

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