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US Shale Oil Dynamics in a Low Price Environment

Executive Summary

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- US unconventional oil has proved to be more resilient than originally anticipated, and shale producers have been able to maintain production at relatively high levels through several months of low oil prices. Production has only recently begun to decline. Companies are in fact doing more with less: cutting costs and getting higher initial production per well. Drilling and completion costs have come down considerably as the service sector discounts services to try and retain market share. Efficiency gains have proved stronger than anticipated and are a result of a number of factors, including better equipment, reduced drilling times, better use of horsepower, and an overall acute awareness of the need to cut costs.
- However, after 2015's second-quarter conference calls, oil prices dropped to lows of $37 dollars a barrel. They have since recovered to the mid-$40 range (at the time of writing), but this movement paints a bleak picture for future production. A further reduction in capital expenditures, shrinking oil rig counts, reduced risk appetite among lenders, and the potential for rising interest rates are all weighing on future production levels in the US. Despite efficiency gains, the number of rigs drilling for oil continue to decline as oil prices falter. This depressed rig count is just now beginning to impact production levels and will further impact production in the coming months.
- Current production data reflects relative stability in the Bakken, but production declines are on the horizon and may perhaps be imminent. The rig count has been reduced by nearly two-thirds since January and permit levels are considerably lower than 2014. The number of wells waiting on completion continues to rise month over month. Well performance has continued to impress, but this is a direct result of enhanced completions in core acreage positions. Bakken production is largely controlled by the top 10 producers; this lack of producer diversification will have an impact on future drilling activity levels and future production as many of these companies delegate capital to other assets which require drilling to hold acreage positions.
- The Permian Basin is currently the most resilient oil play in the face of lower oil prices, but this is only relative to its peers – the Bakken and Eagle Ford. Activity levels remain high in comparison, but Texas and New Mexico production is beginning to show the first signs of decline. Many companies in the Permian Basin are still in the early innings of developing their assets, and they have maintained drilling activity levels despite the decline in oil prices because they need to drill in order to hold acreage by production, in addition to adding reserves to the books. However, recent rig additions over the summer have been withdrawn reflecting multiple months of prices below $50 per barrel.
- Of the three major unconventional oil plays, the Eagle Ford has shown the most tangible signs of weakness – production has dropped over 150,000 b/d from March 2015. The top 10 Eagle Ford producers contribute the bulk of Eagle Ford liquids production and many of these

operators have concentrated assets in the volatile oil and condensate windows. Production has declined month over month and producer optimism is waning. High crude and condensate discounts already pressured Eagle Ford revenues prior to the price decline and are now further exacerbating the strain on revenues.

- Financial worries are beginning to rise as it becomes more difficult for operators to generate cash flow. Shale development has not been led by cash-rich international oil companies but rather smaller, independent US companies, many of which have struggled to generate positive cash flow even in a $100 oil price environment; their profitability, debt burdens, and overall financial stability are issues of concern. Because much of the oil boom has been initially funded by debt, operators are now faced with further cash flow constraints as they work to pay off old debt (and accumulate new debt, typically at a higher interest rate). Larger amounts of operating cash flow are being spent repaying or servicing debt instead of investing in operating activities such as drilling or purchasing acreage. Since the collapse in oil prices, a handful of companies have filed for bankruptcy. In all likelihood more bankruptcies will occur, but it should be noted that no large independent producers have thus far gone bust. Most bankruptcies have been limited to companies with 20,000 b/d of oil production or less and a portfolio of assets across crude, condensate, natural gas liquids (NGLs), and dry gas, not overly weighted in oil.

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