



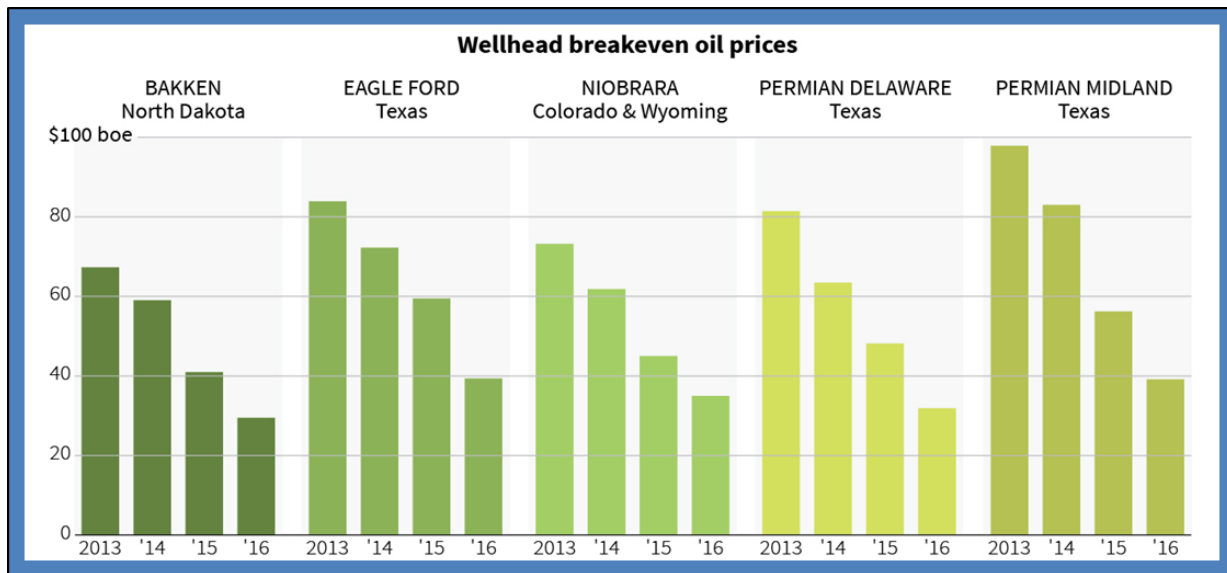
Good Ol' American Shale

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Over the past two years, American shale oil producers have suffered. The low price environment destroyed returns, bankrupted weak companies, and abruptly halted the Shale Revolution; geographically, most of shale production shriveled to a mere handful of counties. With lower oil prices, the exuberance of 2012-2014 was finally reined in. The price downturn taught producers to be more disciplined, forcing them to be smarter about geology, asset choice, technological efficiencies and capital deployment. Most producers now smartly cover capital expenditure with cash flow as opposed to dependence on leverage and financing. In barely three years, the American shale producer has halved their cost of production through operational efficiency gains and large savings in service costs. (See Figure 1.) American shale went head on with the OPEC Cartel, and emerged stronger, leaner and smarter.

Figure 1



As of 11/26/2016

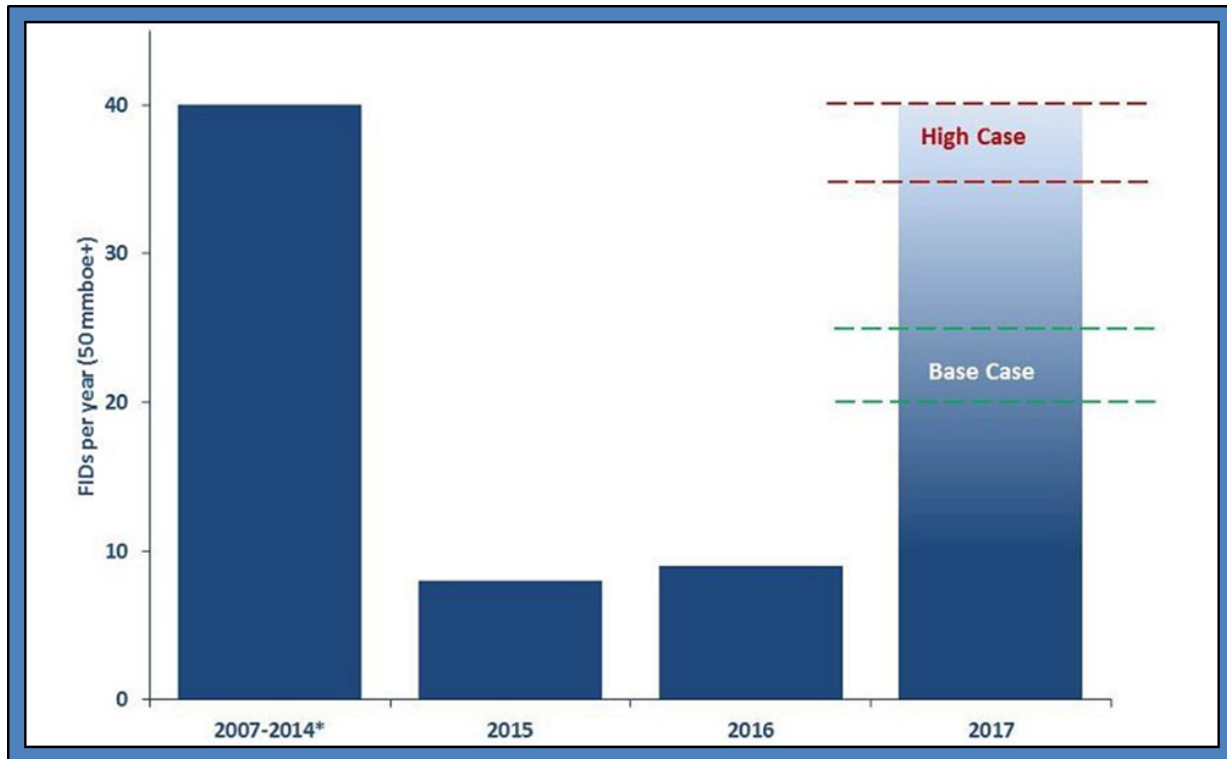
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With oil prices significantly above their lows of 2016 and OPEC’s commitment to price stability, shale companies are once again starting to raise money for increased production. Notably, Diamondback Energy raised over \$1 billion in December 2016, as it looked to expand its footprint in the Permian Basin. According to the U.S. Bureau of Labor Statistics, the downward trajectory of oil and gas extraction and



services jobs seems to have not only stopped but also turned higher. In November 2016 we saw the number of jobs in this category rise by about 3,300, the first increase since September 2014. Also, rig counts are now at the highest level seen since December 2015 as short cycle shale producers smartly deployed capital in high yielding acreage as prices stabilized above \$45. It is anticipated that U.S. oil producers will increase spending this year, as current guidance from numerous shale producers is indicating a growth of 350kb/d over the course of 2017. Wood Mackenzie expects a 3% (to \$450 billion) increase in 2017 global upstream spending, with an increase of 23% (to \$61 billion) for the lower 48 states spending as well. The research company also expects global Final Investment Decisions (FID's) to rise by 11 to 20 in 2017. (See Figure 2.) With oil prices forecasted to average \$60-65 in 2017, and higher through 2020, there is little doubt that the recovery has begun and we are entering a new phase of the Shale Revolution.

Figure 2
Final Investment Decisions by Year



Source: Wood MacKenzie forecast 2017. Forecasts, projections and other forward looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections and other forward statements, actual events, results or performance may differ materially from those reflected or contemplated.

There is concern that U.S. oil producers will once again hamper price appreciation by flooding the market with crude. Though possible, anticipated backwardation in the crude curve will limit the upside required to hedge future production. OPEC production cuts, announced November 30, 2016, will likely be enforced with about 65-70% compliance. In complying with these cuts, OPEC is looking to flip the crude oil curve into backwardation. Allowing prompt prices to rise to a healthy target of \$60 or higher



while keeping forward prices depressed at (or below) \$55 a barrel will ensure that the rate of future shale production growth is contained. This curve structure also allows OPEC to increase production when immediate demand arises. Another argument against shale producers oversupplying the market is the fact that increases in rig counts have been required to counter the normal depletion rate of existing wells. New shale well production rates typically drop about 75% during the first year of production, with the U.S. Energy Information Administration estimating the annual decline rates of Bakken, Eagle Ford and Permian wells at 47%, 55% and 22% respectively. Lastly, offshore oil companies, both domestic and abroad, are less likely to benefit as much as their shale counterparts due to additional costs and longer investment cycles, which lead to a higher breakeven price. As such, it is more likely that we see a steady to gradual increase in U.S. production rather than a “flood” as some analysts have suggested.

The oil price recovery that started in mid-2016 is likely to continue through 2017 and U.S. shale companies are an investment most likely to benefit from this price appreciation. They learned from their mistakes and have become nimbler. Good Ol' American Shale is back! And it's stronger, leaner and smarter.

Author Biography

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Ebele Kemery, executive director & portfolio manager, is a member of the Global Fixed Income, Currency & Commodities (GFICC) group at J.P. Morgan Investment Management. Based in New York, Ebele is the Head of Energy Investing. An employee since 2007, she has previously held roles in London, New York and Houston as a physical and derivatives oil trader, specializing in the North American and Transatlantic energy markets. She is currently actively managing four commodity funds, with outperformance primarily driven by repeatable energy alpha generation. Ebele's investment strategy is a bottoms-up fundamental approach, which employs a set of disciplined qualitative and technical variables to evaluate market opportunities, whether the market is in bull or bear cycles. Her expertise in accurately understanding and forecasting supply/demand dynamics and capitalizing on inventory imbalances is used to develop a well-diversified set of tactical and thematic alpha strategies. Ebele's physical oil background allows her to digest market information typically overlooked by the average investor, and her experience in options gives her the ability to state high conviction views within risk parameters. Her views also drive thematic fixed income investments across Macro, Emerging Markets, Investment Grade/High Yield Credits and Foreign Exchange investment vehicles.

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