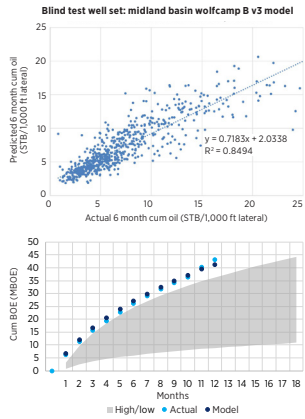


data analytic derived pay

- Chevron database includes 9.4 million* well attribute datapoints
- Proprietary multivariate analytics methods to establish geologic target zones and landing strategies
- Analytical methodology uses randomization and iteration to identify key well performance variables and target rock properties

analytic model robustly validated



partial dependency interpretation of key predictor variables

From Hastie et al. (2009) in *The Elements of Statistical Learning*:

$$\bar{f}(x) = \frac{1}{n} \sum_{i=1}^n f(x, x_{iC})$$

where x is the variable for which partial dependence is sought, and x_{iC} is the other variables in the data. The summand is the predicted regression function.

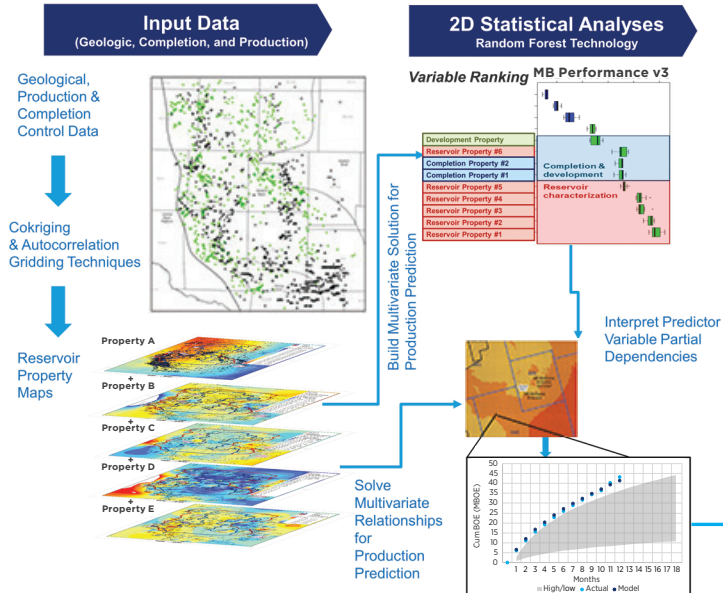
* As of 2/1/2018



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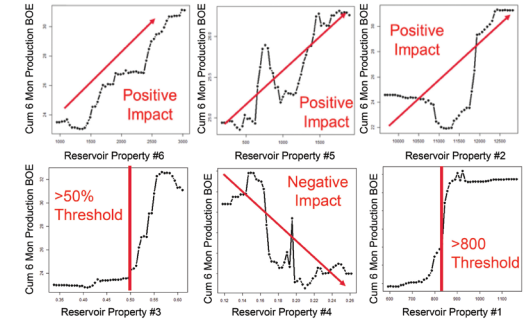
optimization of landing zone/ well placement

EPIC (enhanced pay integrated curve) workflow*



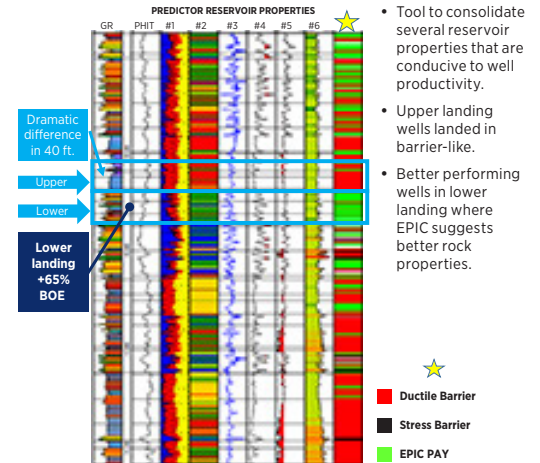
* Patent pending 7/2017

recoverable pay cutoffs

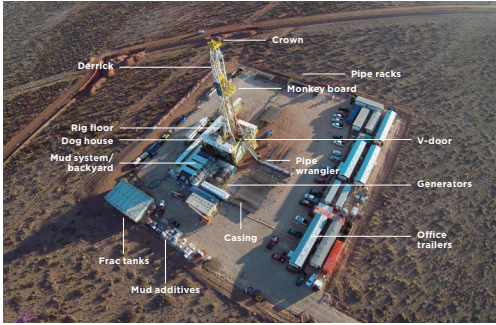


EPIC pay curve layout

case study of EPIC target validation

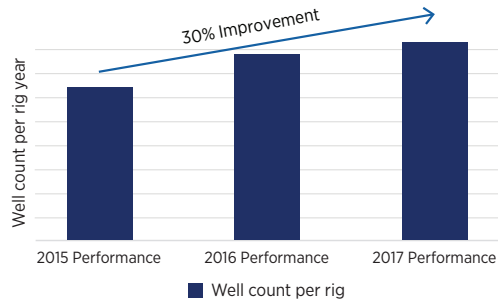


foundational practices



- pad and batch drilling
- offline cementing
- rig-fleet performance benchmarking

Operated drilling performance



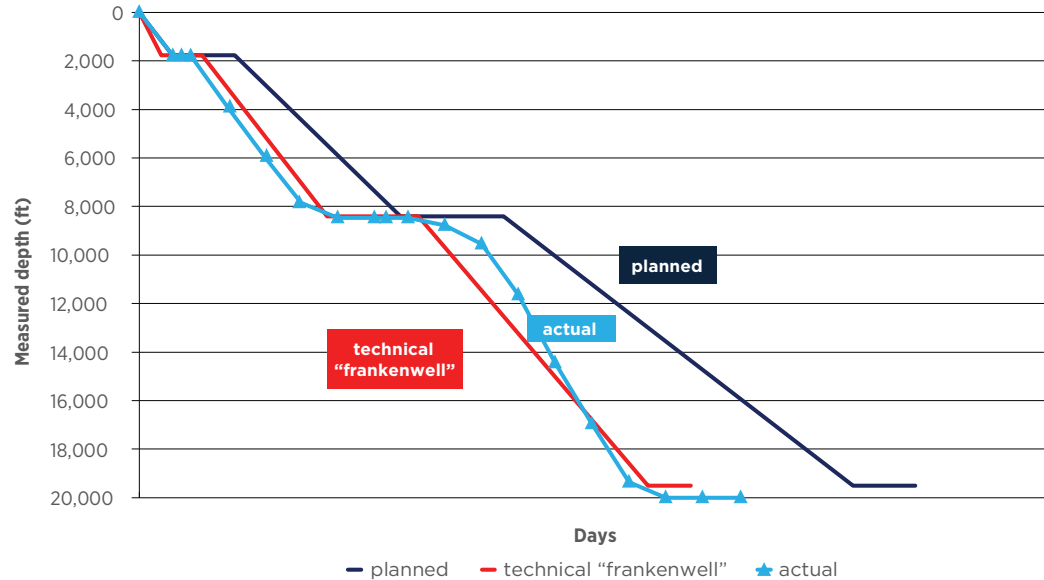
* Normalized to 7,500' lateral length



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continuous drilling efficiency improvement

tracking days vs. depth*



* Well in Midland Basin, Lower Spraberry, 10,000' laterals, drilled 2Q 2017

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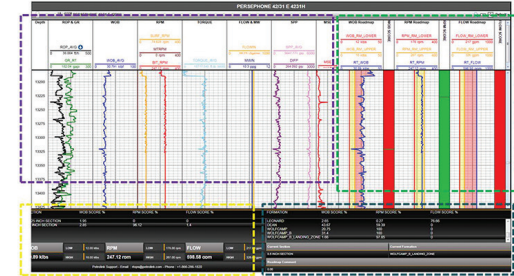
advanced practices

MAXDRILL™

- Proprietary performance drilling process
- Field-driven design changes

planning and execution

- Real-time monitoring against provided Drilling Parameter Roadmap



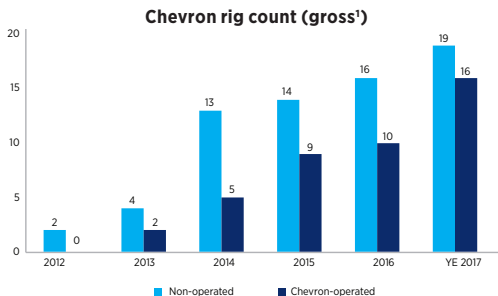
benefits

- Improves drilling efficiency, as fleet grows
- Reduces cycle time*
 - 30% for surface section
 - 15% for intermediate section
 - 20% for curve and lateral section

* Normalized improvement based on performance at respective lateral lengths

strategy

Leverage capital efficient pilot and learning approach to incorporate best practices into Chevron-operated developments.



¹Estimated 2017 based on previous guidance

best practices

- Areal and bench well spacing
- Proppant and fluid intensity, type
- Stage and cluster spacing
- Perforation strategy
- Drawdown and artificial lift



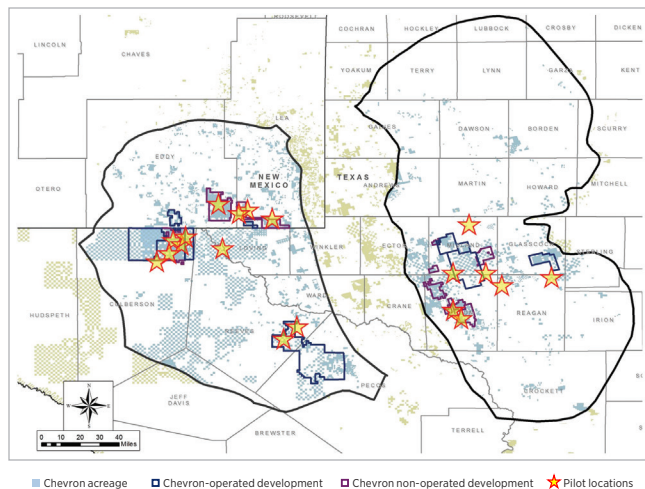
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technology driving improved capital efficiency

joint participation and pilots

co-owners

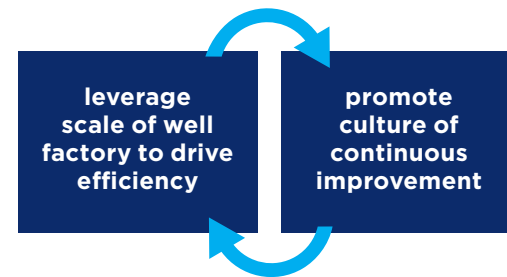
- Among the most active in Permian
- 7 joint areas
- 13 formations
- 19 distinct pilots



pilots

- Variable proppant/fluid loading
- Variable stage/cluster spacing
- Variable shot clusters
- 12,500+ laterals
- Diverter
- Fiber optics
- Micro-seismic

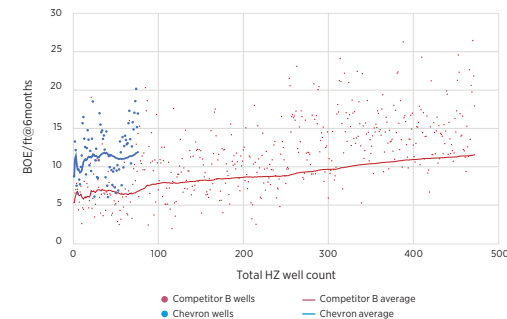
factory implementation



- Identify high-impact opportunities throughout factory phases
- Prioritize completion design pilots monthly based on continuous learning
- Optimize design by development area and reservoir

results

Midland basin wolfcamp B
Average 6 months cumulative production (BOE/ft)

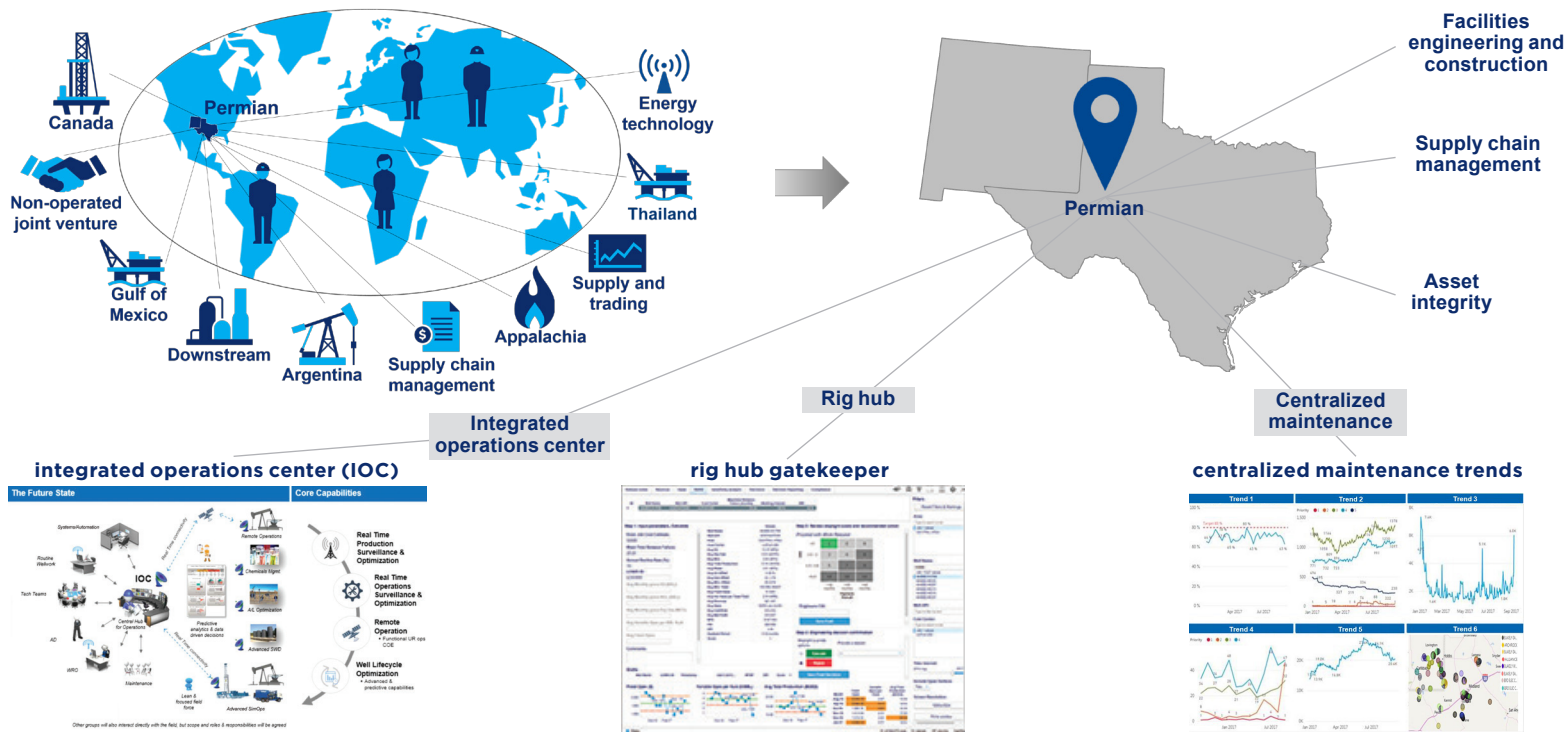


* Data from IHS (2011-17), most recent two months Chevron data internal



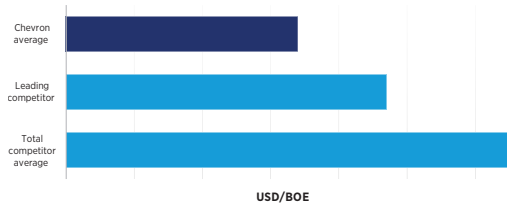
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continuously improve permian operating expense



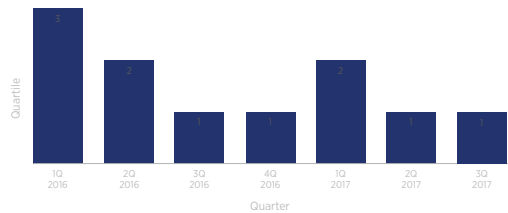
benchmarking performance

leading competitor advantage
lease operating expense



Source: Solomon 2016 Permian Basin unconventional operating cost and reliability benchmarking study

chevron permian lease operating and general administrative expenses



Source: Chevron analysis, based on S&P benchmarked peer companies - 10Q (SEC filed quarterly report)/MCBU - SAP