Permian Water Outlook



Presentation To UL Partner Forum Midland, Texas June 13, 2019

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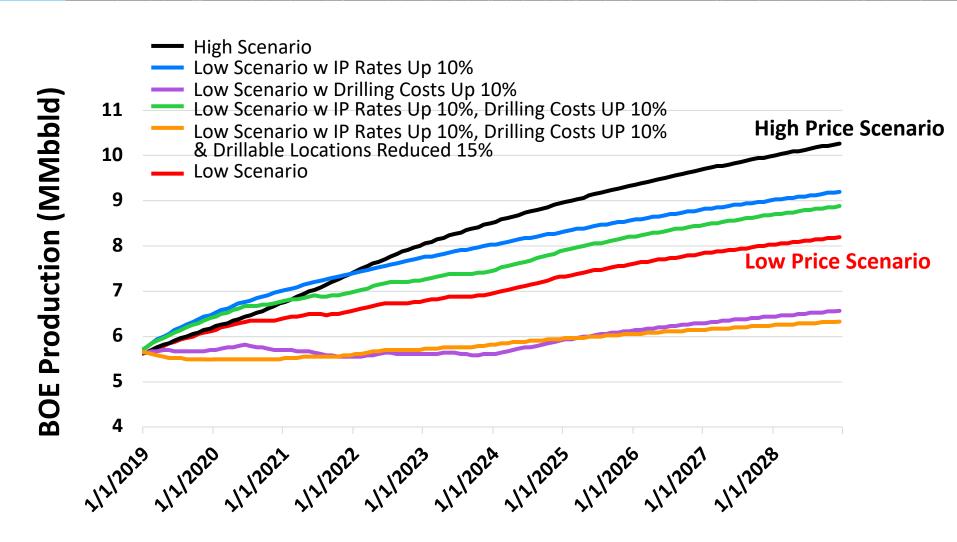
Permian water study objectives

Generate a comprehensive assessment of water issues associated with Permian Basin oil and natural gas production growth including:

- Hydraulic fracture stimulation water needs
- Implicit produced water generation volumes
- The structure of disposed water services, including available and planned disposal capacity and requirements
- The ability of the Delaware Mountain Group and San Andres formations to accept prospective disposed volumes
- Implications for infrastructure development and production economics

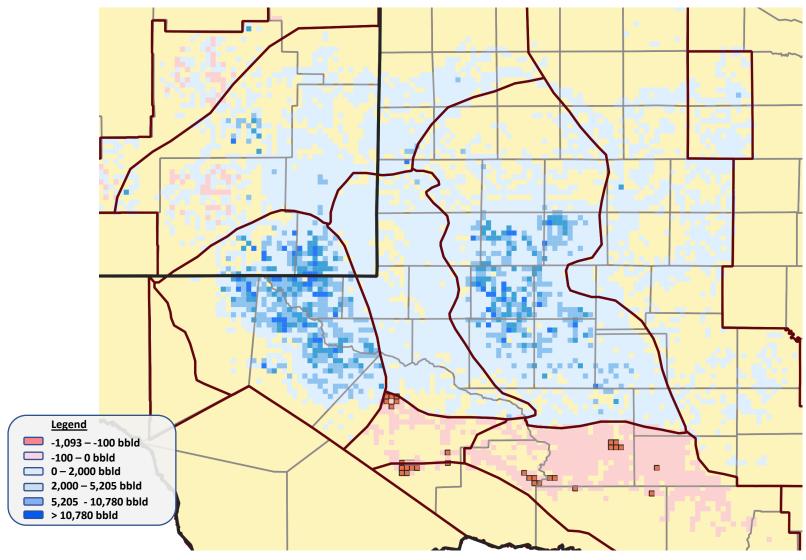


BOE production assumptions 2019-2028





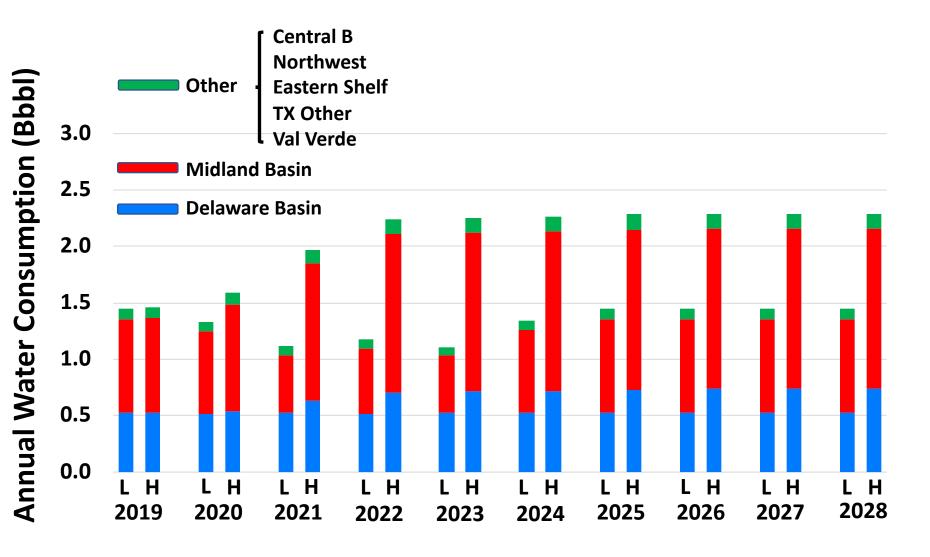
Production growth focused on Delaware & Midland Basin sub-areas



Source: B3 and Drillinginfo (ProdCast).

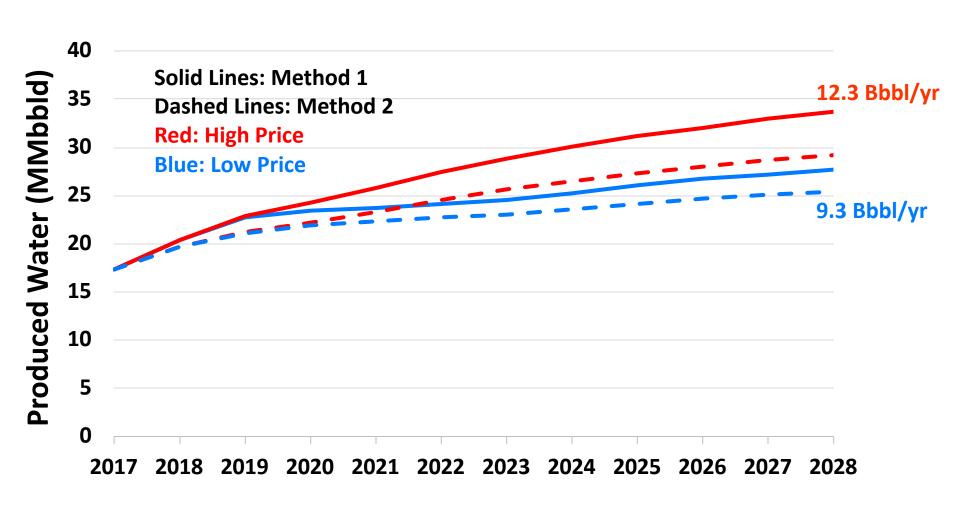


Water demand for hydraulic fracture stimulation could grow nearly 60% by 2028



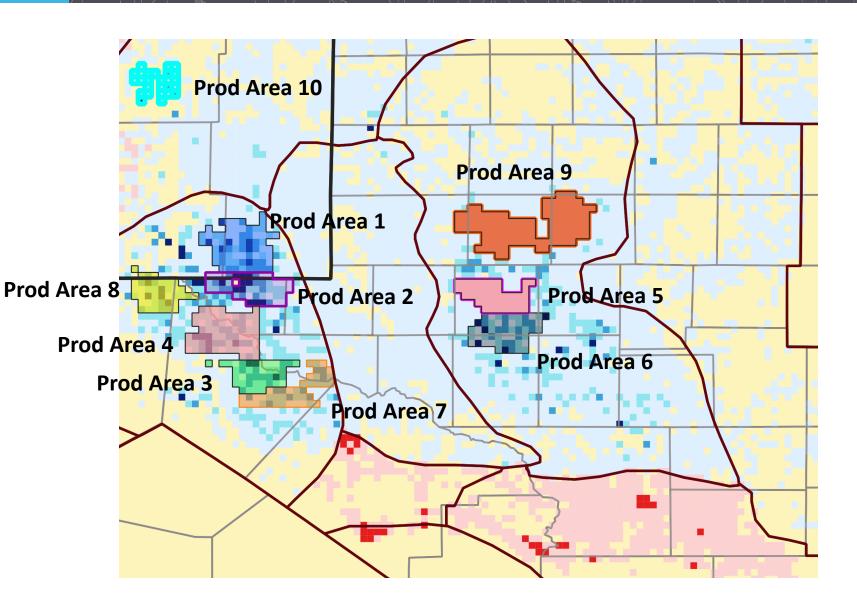


Annual produced water volumes may grow by between 45% and 92% by 2028





The balance of the project will focus on the impacts of growth in these production areas





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