



MATURE FIELDS



UNCONVENTIONALS

Bakken Operator Exceeds 1,000 Day Run in Low Volume Unconventional Well

MAJOR OPERATOR IN BAKKEN MAXIMIZES ROI WITH SUMMIT ESP® TECHNOLOGY AND EXPERTISE

MOUNTRAIL COUNTY, ND

CHALLENGE

Major operator needed a pumping system that would outperform rod pumps in a low volume, low pressure well

- » Gas slugging
- » Rising GOR
- » Solids production
- » High bottomhole temperature
- » Low bottomhole pressure

SOLUTION

Low volume pumping system with gas separation and specialty seals

- » Tiger Shark® SF320 and SFGH2500 tapered system
- » Liberator™ vortex gas separator
- » Tandem Defender® seals

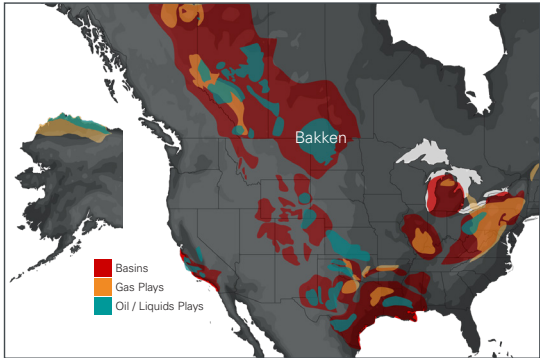
RESULT

- » Run life of 1,057 days

OVERVIEW

In unconventional wells, many operators start to see a decline in production due to issues such as rising gas-oil ratio (GOR), solids production, and gas slugging.

In the Bakken formation, one of the harshest environments for artificial lift systems, an operator was using a Summit ESP® electric submersible system and started experiencing a decline in production. Due to rod lift systems having their own challenges, especially in extreme conditions with excessive gas and high depths, this particular Operator wanted to continue using an ESP system and challenged Summit ESP to propose a solution.



CHALLENGE

In early 2017, the operator requested an ESP system designed to produce less than 350 BPD with producing bottomhole pressure of less than 300 PSI. In addition to this, the pump would have to overcome rising GOR, gas slugging events, high bottomhole temperatures, low bottom hole pressure, and solids production.

SOLUTION

Summit ESP proposed our Tiger Shark® SF320SF320 and SFGH2500 pumps in a tapered system design, coupled with our Liberator™ vortex gas separator. This engineered our system for maximum efficiency and gas handling capability. Tandem Defender® seals were selected for redundancy and maximum run life capacity.

RESULT

The flow range of the SF320 pump closely aligned itself with the well's production rate. The SFGH2500 pump was capable of operating at the proposed design rate and had a calculated maximum free gas tolerance of 84.7%. Because of this tailored engineered solution, our Operator was able to achieve an extraordinary run time of 1,057 days when it was pulled.



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