

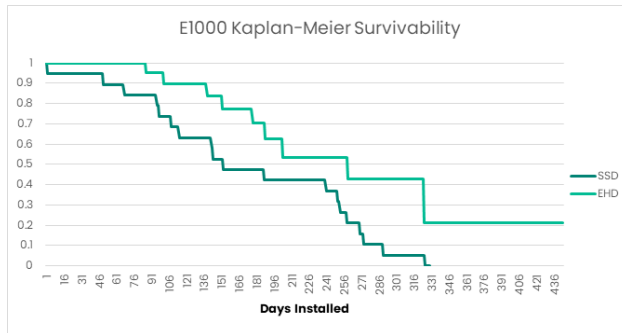
# LiftPRIME E-1000 high-efficiency pump improved ESP runlife by 71 percent for Bakken producer with high sand and gas

## CHALLENGES

- Erosive wear of internal ESP components resulting in reduced runtimes due to frac sand in Bakken operations
- Dismantle, Inspection, and Failure Analysis (DIFA) reports showed significant wear to pump impellers, leading to a reduction in head generation and shaft wear and breaks
- Equipment needed to be suitable for harsh abrasive environment while producing from 250-1,100 BPD

## SOLUTION

- Baker Hughes suggested switching from a stabilized severe duty (SSD) pump to the [LiftPRIME E-1000 high-efficiency pump](#), for its:
  - Ability to achieve the highest efficiency across the widest operating range in the industry
  - Capability of handling sand and downthrust more effectively due to its larger thrust surface area and through the use of Silicon carbide vs. Tungsten carbide running surfaces
  - Ability to provide better performance at lower flowrates due to enhanced capabilities of the carrier bearings combined with the Extreme Harsh Duty (EHD) Thrust Module



ESP survivability above 50% with the LiftPRIME E1000 pump.

## RESULTS

**71%**  
Survivability from 152 to 260 days

**Eliminated**  
Need to run an additional ESP system before transitioning to alternate form of lift

**Successfully**  
Operated under abrasive conditions and ESP setting depths of 9,800 up to 10,700 ft

**3%**  
Reduction in low amperage fluctuation in early stages of production