

## ADVANCED SPM™ FLUID END TECHNOLOGY MINIMIZES NPT AND COSTS IN THE OILFIELD

### Advanced SPM Fluid End Technology



#### AT A GLANCE SEGMENT

Pressure Pumping / Hydraulic Fracturing

#### CHALLENGE

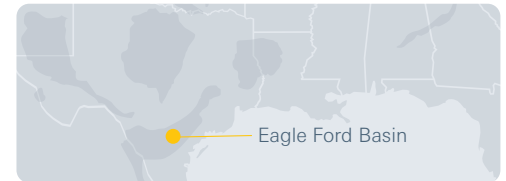
Fluid end wear and washout drove downtime and costs.

#### SOLUTION

SPM fluid end improved durability and uptime.

#### LOCATION

Eagle Ford Basin



As oilfield companies strive for greater frac intensity to increase total oil and gas yield, fluid ends remain one of the largest operating expenses for a site. Enduring intense horsepower and pressure, fluid ends are highly susceptible to accelerated erosion, cracking, washout and other usage-related failures. These challenges can increase maintenance costs and create unplanned downtime that slows productivity in an environment that seeks to limit interruptions.

After experiencing issues with fluid end wash, an oilfield service company in the Eagle Ford Basin approached their local SPM oilfield services team for assistance in increasing pumping hours while decreasing costs and maintenance in the red zone.

Packing washout is a leading cause of fluid end downtime and often results in operators scrapping the fluid end block, which drives up equipment costs and nonproductive time (NPT). To set packing properly, the packing nut must remain tight but conventional packing wears away after extended use or improper lubrication. This compounds the extra space created by a loose nut, leading to scarring and washboarding that further degrades the sealing surface and prevents a reliable seal.

The service company's pumps operated in extremely challenging conditions - 100 mesh sand, 10,000 psi treating pressure, two-to-three-hour stages and 650,000 pounds of proppant per stage. The operating conditions led to seal wear and decreased component longevity which led to packing washout, ultimately reducing pumping hours and increasing OpEx and maintenance costs. Those factors negatively impacted the service company's profitability, leading to the team turning to their trusted oilfield service provider.

### Longer Fluid End Life Leads to Longer Pumping Hours

SPM fluid end technology was installed to mitigate jetting wear and prolong the life of fluid end blocks. Compared to legacy SPM fluid ends, the EXL fluid end is seven times more resistant to fatigue which helps lower repair and replacement costs. It protects the fluid end from packing bore wash to extend pumping hours.

With SPM's fluid end technology, the service company's D-ring seal wear improved up to 10-fold and packing bore washboarding seal wear was reduced up to 12-fold. Additionally, jetting wear decreased two to three times compared to previous wear rates. Seal wear, retainer and packing nut downtime were eliminated and all blocks were repairable.

"Cover seals are lasting much longer than D-rings. The new valve stops are easier to install and line up, and the suction and discharge covers are the same, which makes maintenance easier," commented a representative from the service company. "The block also pumped an additional 75 minutes despite a packing washout, allowing us to complete the stage."

By implementing the SPM fluid end technology, the service company reduced operating costs and NPT. Those improvements increased pumping hours and ultimately improved profitability.

## Field-Proven Fluid End Performance

