

Conversion From Gas Lift to Abrasion-Resistant ESP Boosted Oil Production Over 300%

CHALLENGE

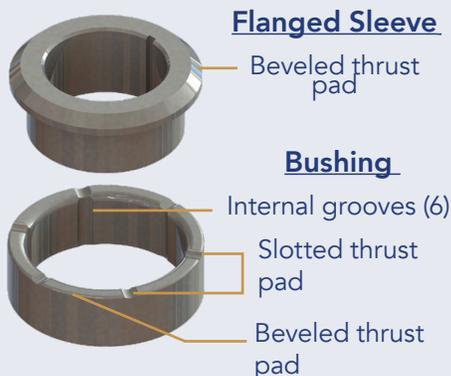
Poor production with gas-lift system in abrasive downhole environment

SOLUTION

Valiant ESP system with triple-tandem VC1250 ARM pumps and tandem vortex gas separators

ARM Bearing Enhancements

- Unique slot and groove geometry
- Improved flow of solids through & around TC sleeves & bushing
- Reduced heating & wear at bearing-impeller/diffuser contact points



After experiencing sub-optimal production from a gas-lift well, a Mid-Con operator contacted Valiant Artificial Lift Solutions to help boost production. By replacing the gas-lift system with an abrasion-resistant ESP, Valiant was able to provide immediate results and significantly increase oil recovery from the well.

Excessive sand and solids in the production fluid required installation of ultra-durable 1,250 barrel-per-day Valiant Abrasion Resistant Modular (ARM) pumps with a total of 266 stages in modular configurations at a setting depth of just over 6,800 feet.

To increase pumping efficiency and protect against the wear-inducing effects of entrained gas and gas slugging, Valiant also installed tandem abrasion-resistant gas separators below the primary pump intake.

Constructed with tungsten carbide (TC) flanged sleeve bearing sets, Valiant ARM pumps are specifically designed to deliver advanced wear protection without sacrificing pump efficiency.

Compared to AR Compression pumps, ARM construction provides enhanced protection against excessive thrust loads generated during gas slugging. This allows for deeper setting depths because pump down-thrust load is carried at each modular bearing set level rather than being transferred to the ESP seal section.

Valiant's ARM bearing sets feature a system of slots and grooves with unique geometry, proven in the field to allow sufficient flow of solids through and around the sleeve and bushing, thus preventing accelerated wear, heat build-up, and shaft breakage associated with sand accumulation in these spaces.

Prior to the switch, the well was producing approximately 30 barrels of oil per day with an 80% water cut, costing the operator time and money. As a result of installing a Valiant ESP system, this operator saw an immediate increase in oil production to 100 barrels per day, improving recovery by more than 300%.