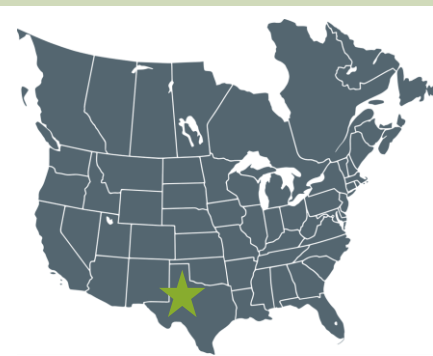


# MAXIMIZE DRAWDOWN MINIMIZE COSTS

## Optimize the Wolfcamp

Replace gas lift with the HEAL System to enable efficient rod pumping



Permian Basin, West Texas, USA

### Depth

1825 – 2100 mTVD

6000 – 6900 ftTVD

### Oil Rate

3.2 – 16 m<sup>3</sup>/d oil

20 – 100 bbl/d oil

### Watercut 60 – 90%

### Gas Oil Rate (GOR)

110 – 1420 m<sup>3</sup>/m<sup>3</sup>

620 – 8,000 scf/bbl

### The Challenge

- The Wolfcamp is a formation in the Permian basin, largely contained in North Western Texas and extends into New Mexico.
- Gas lift is confined by high bottom hole pressures, limiting drawdown and thus production.
- Gas lift incurs high operating costs.
- Due to the depth, high initial decline rates and high GOR, it is difficult to design and operate an effective, efficient rod pumping system.

## The HEAL System™

### The foundation for efficient artificial lift in horizontal wells

In the Wolfcamp formation, the HEAL System with a rod pump can replace gas lift and enable efficient rod pumping. The System minimizes slug flow from the horizontal so the pump gets a consistent production rate. Its ability to provide extremely efficient downhole separation minimizes gas interference and gas locking to maximize pump fillage.

The HEAL System is able to reliably lift produced fluids from the horizontal to shallower pump depths in the vertical while maintaining a very low bottomhole pressure (BHP). The ability to produce at low BHP maximizes drawdown to effectively minimize costs.

The diagram below represents seven HEAL System installations intended to replace gas lift. These wells experienced an average increase in total fluid rate of over 40% versus the previous production trend.

