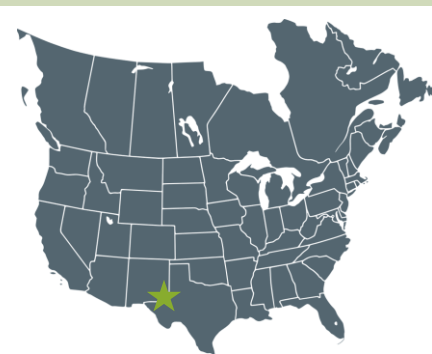


MAXIMIZE DRAWDOWN MINIMIZE COSTS

Optimize Gas Lift

Efficient gas lifting in high rate gassy environments



Bone Spring formation, New Mexico, USA

Depth

2,440 mTVD
8,000 ftTVD

Oil Rate

8 – 50 m³/d oil
50 – 300 bbl/d oil

Watercut 75 – 95%

Gas Oil Rate (GOR)

180 – 1,400 m³/m³
1,000 – 8,000 scf/bbl

The Challenge

High rate gassy oil wells are often produced using gas lift until transitioning to a terminal lift solution such as rod pump.

Horizontal wells are susceptible to slug flow due to hydrodynamics, undulations in wellbore trajectory and operational upsets.

Packer standoff in gas lift wells is an additional cause of slug flow and is difficult to reduce due to the perceived retrieval risk of setting packers around the bend.

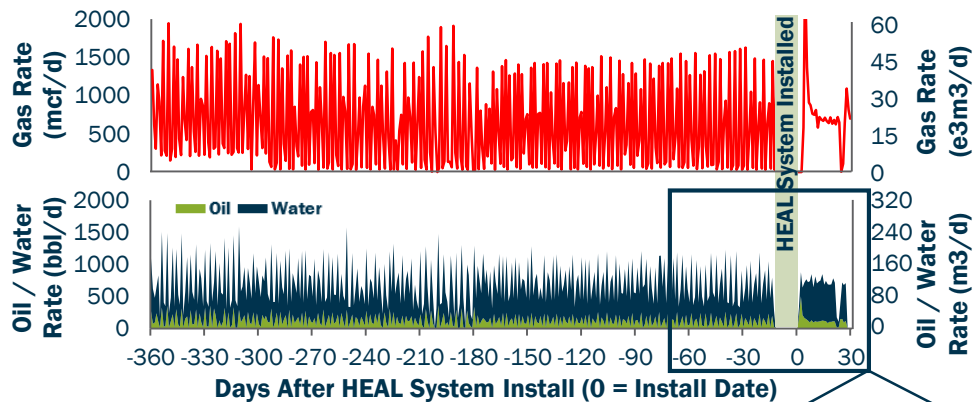
The HEAL System™

The foundation for efficient artificial lift in horizontal wells

Packer standoff in gas lift wells is a major contributor to slug flow and no amount of gas lift gas can disperse slugs below the last injection point. Reducing standoff to the base of the horizontal is difficult due to the retrieval risk of packers set around the bend. Furthermore, maximum drawdown is not being achieved, resulting in less than optimal production.

As was demonstrated with a major operator in the Permian basin, coupling the HEAL System with gas lift has considerable benefits such as:

- Effectively **eliminated packer standoff** resulting in **slug flow mitigation** and thus **easier operation, increased production and reduced OPEX.**
- **Maximized drawdown** resulting in increased wellbore deliverability.
- **Mitigated retrieval risks** with the **Horizontal Retrieve Safe Packer.**
- **Simple and cost effective transition to mechanical lift system** such as rod pump if required in the future.



Substantial slug flow mitigation

15% increase in production on a BOE basis

\$20,000 USD incremental monthly cash flow

