

Objective/Scope

The Texas Tech Gas Lift Consortium was formed to advance the design, modeling, and optimization of late-life gas lift systems such as intermittent gas lift and gas assisted plunger lift. We present preliminary results from this research effort which has been in operation for 18 months.

Methods

A 1,500-foot test wellbore at Texas Tech University was equipped for intermittent gas lift experiments. In addition, we have assembled field-scale data from multiple wells on IGL with bottomhole pressure sensors. These experiments and guide the creation of numerical models to design, survey, and optimize intermittently producing gas lift systems.

Results and Conclusions

We aim to share our findings regarding:

- 1) The importance of high-frequency data collection for intermittently operating gas-lift systems.
- 2) Lower fallback factors that expected for given slug velocities in certain field cases.
- 3) Opportunities associated with novel measurements (distributed fiber optic sensing, high-frequency pressure measurements)