2025 ALRDC Gas Lift Workshop San Antonio, Texas, USA; June 2-5

Alternate Gas Lift Tracer Pilots

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CO₂ tracing is a proven method for identifying where gas lift gas is being injected into a well without affecting production. However, there are situations where an even less-intrusive process would be preferred. Some issues that have been encountered in ExxonMobil's gas lift tracing experience include frozen sampling lines, high injection pressures, injection and measuring system logistics, and classified area operating processes. The authors aimed to overcome these challenges with variations on traditional tracing techniques.

A freeze-resistant produced gas sampling system and two unique gas tracers and associated measurement devices were trialed on two wells in the East Texas Hawkins field. Radioactive gas tracing addressed common issues with gas sampling and area classification. Minimal concentration (SF $_6$) tracing addressed logistics challenges. Both tracer concepts were benchmarked against CO $_2$ tracing and showed promise. The alternate gas lift tracers pilot design, execution, and results will be discussed in this presentation.