



Closed Loop Gas Capture

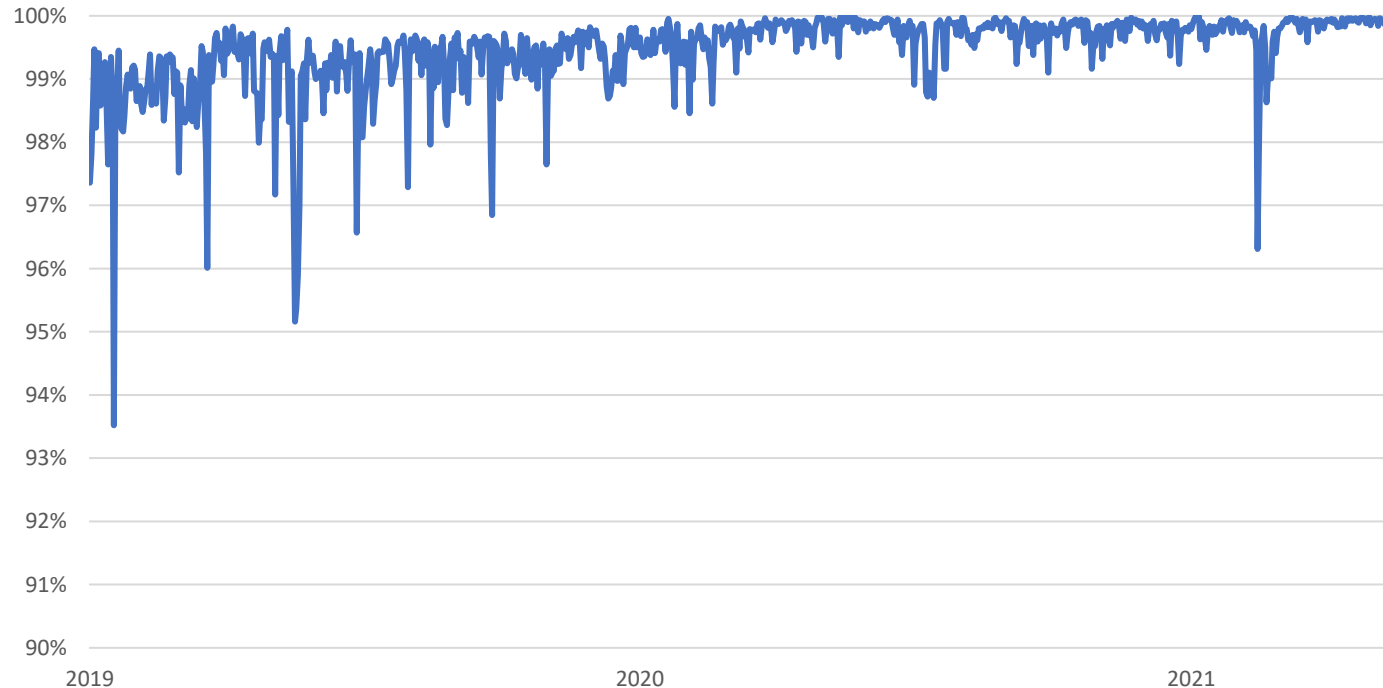
IOGCC Annual Conference 2021



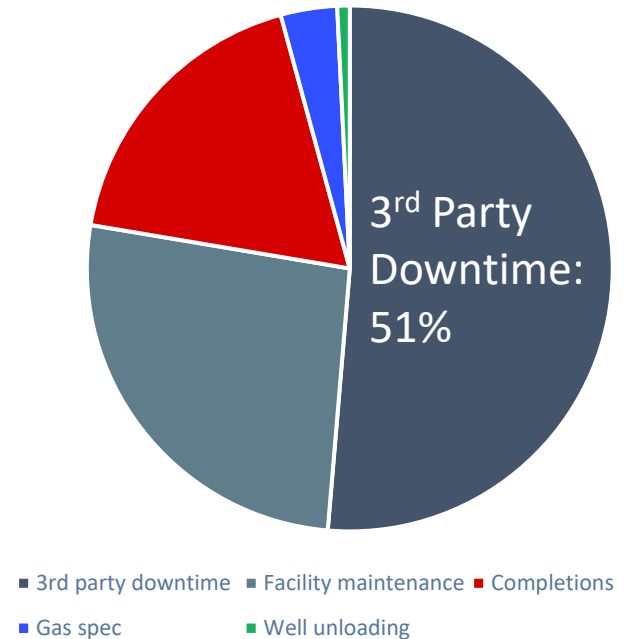
Orpheus Leading Eurydice from the Underworld, Jean-Baptiste-Camille Cordot, 1861
*Photo Credit: emuseum.mfah.org

How did the idea for CLGC come about? Some helpful context.

Permian Basin Gas Capture



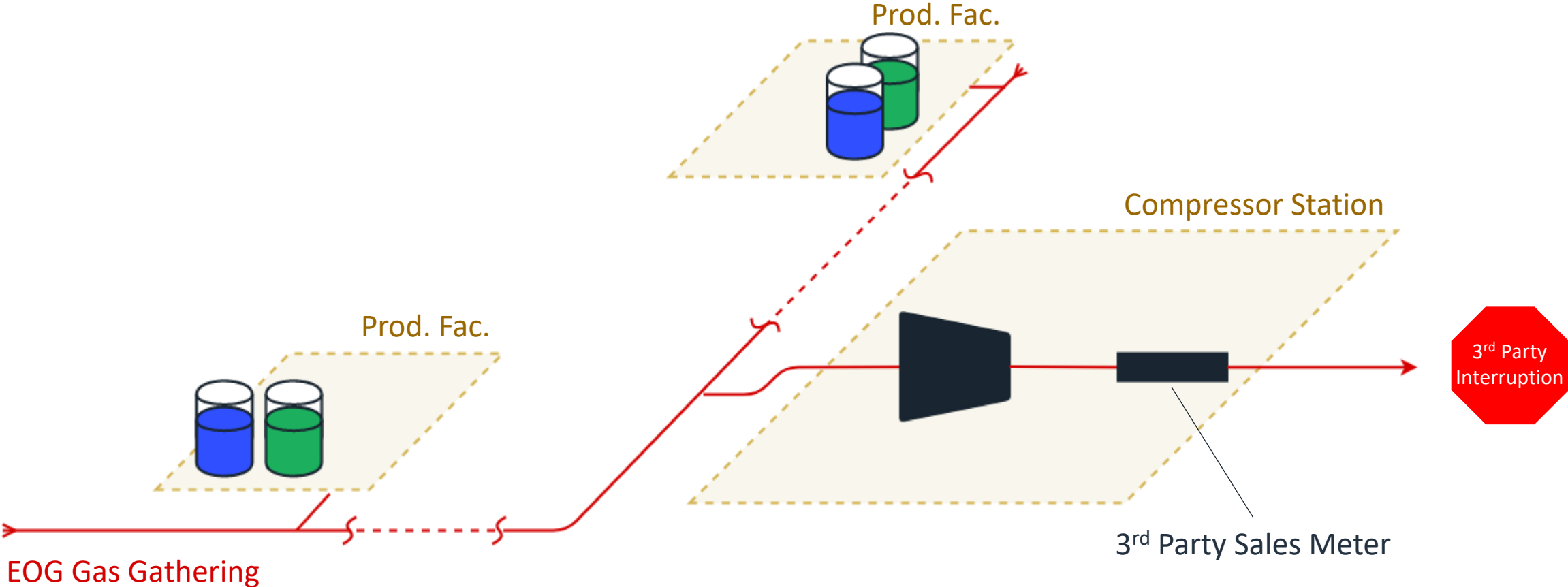
Remaining Flared Volumes



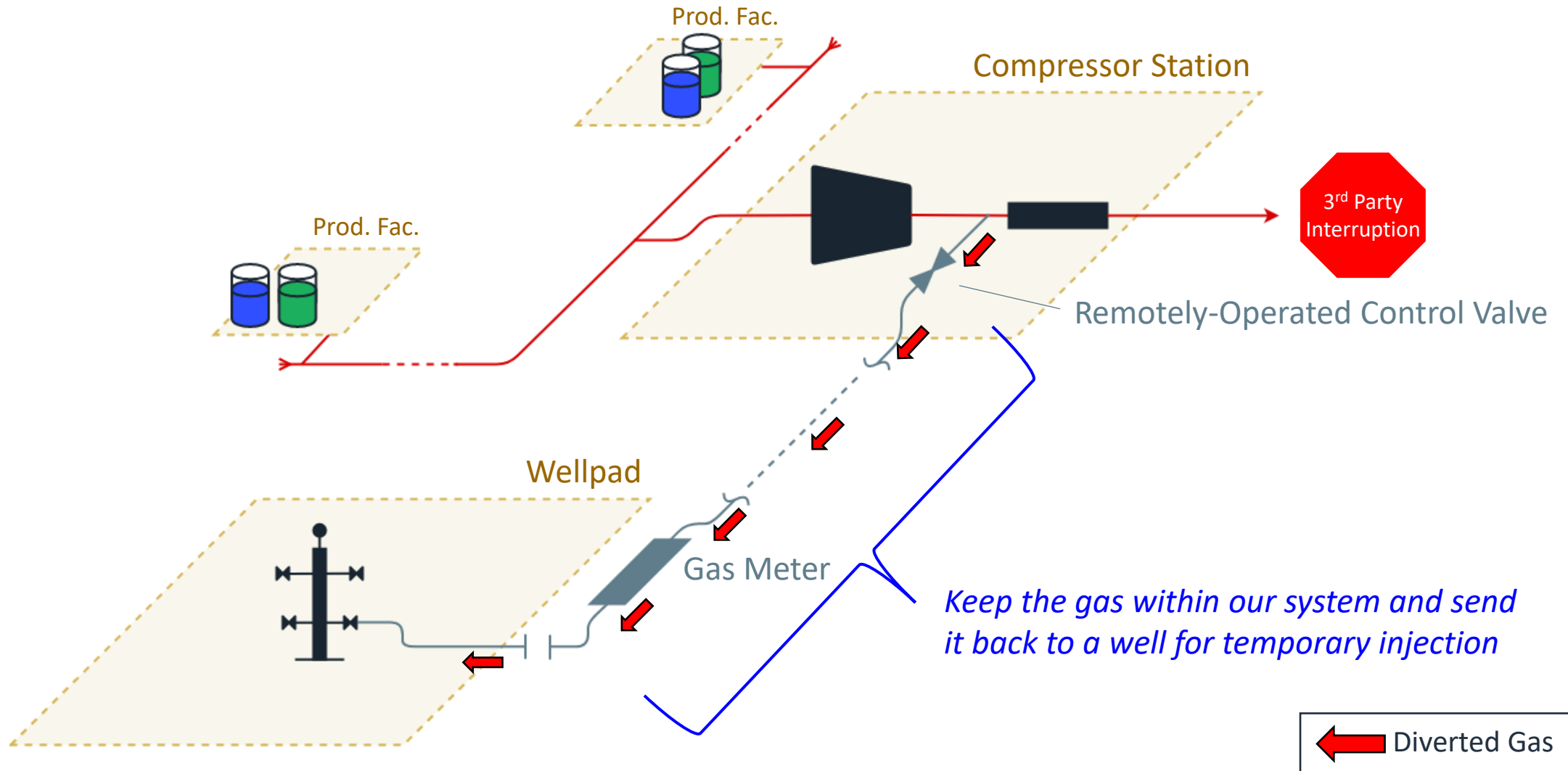
ZERO ROUTINE FLARING BY 2025

99.8% WELLHEAD GAS CAPTURE RATE IN 2021

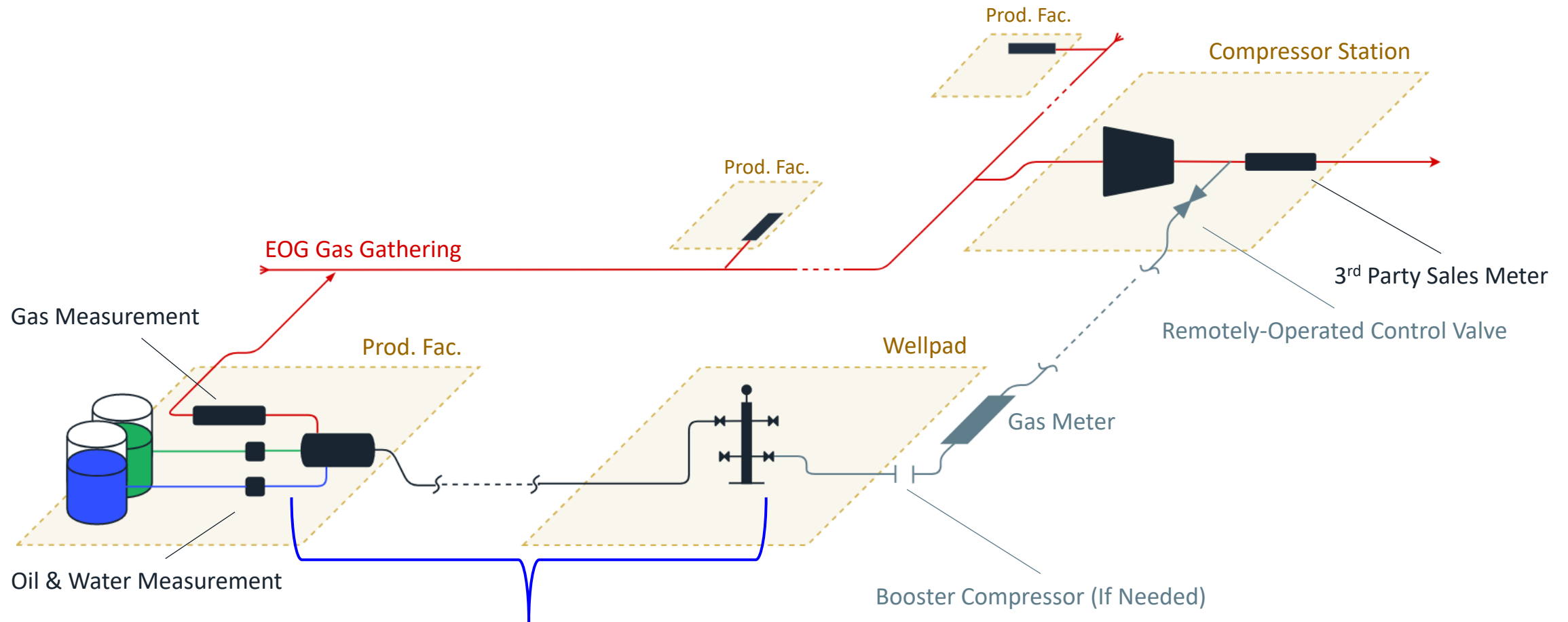
What do you mean “3rd Party Downtime?”



Injection During 3rd Party Downtime

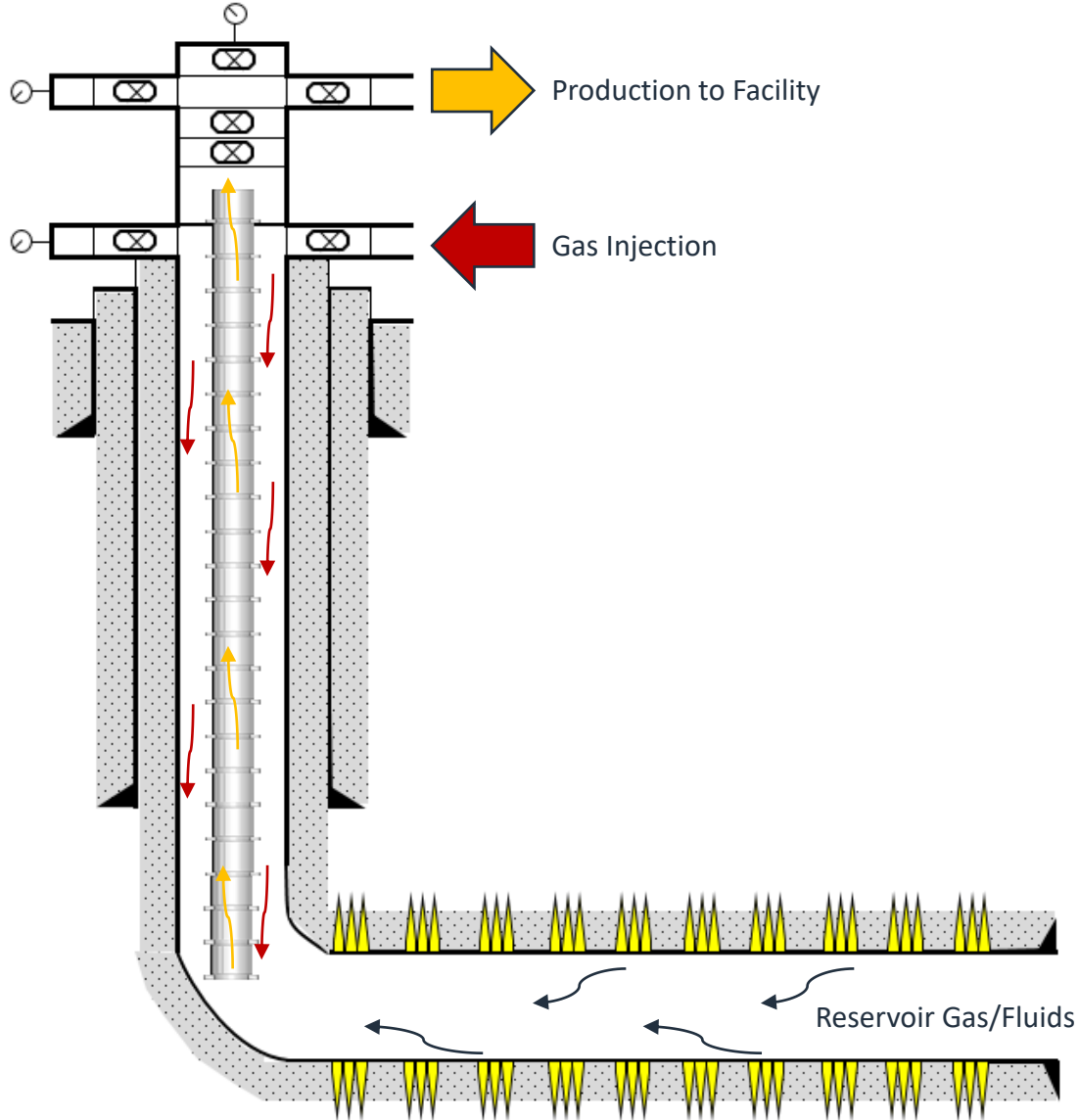


Production and Recovery

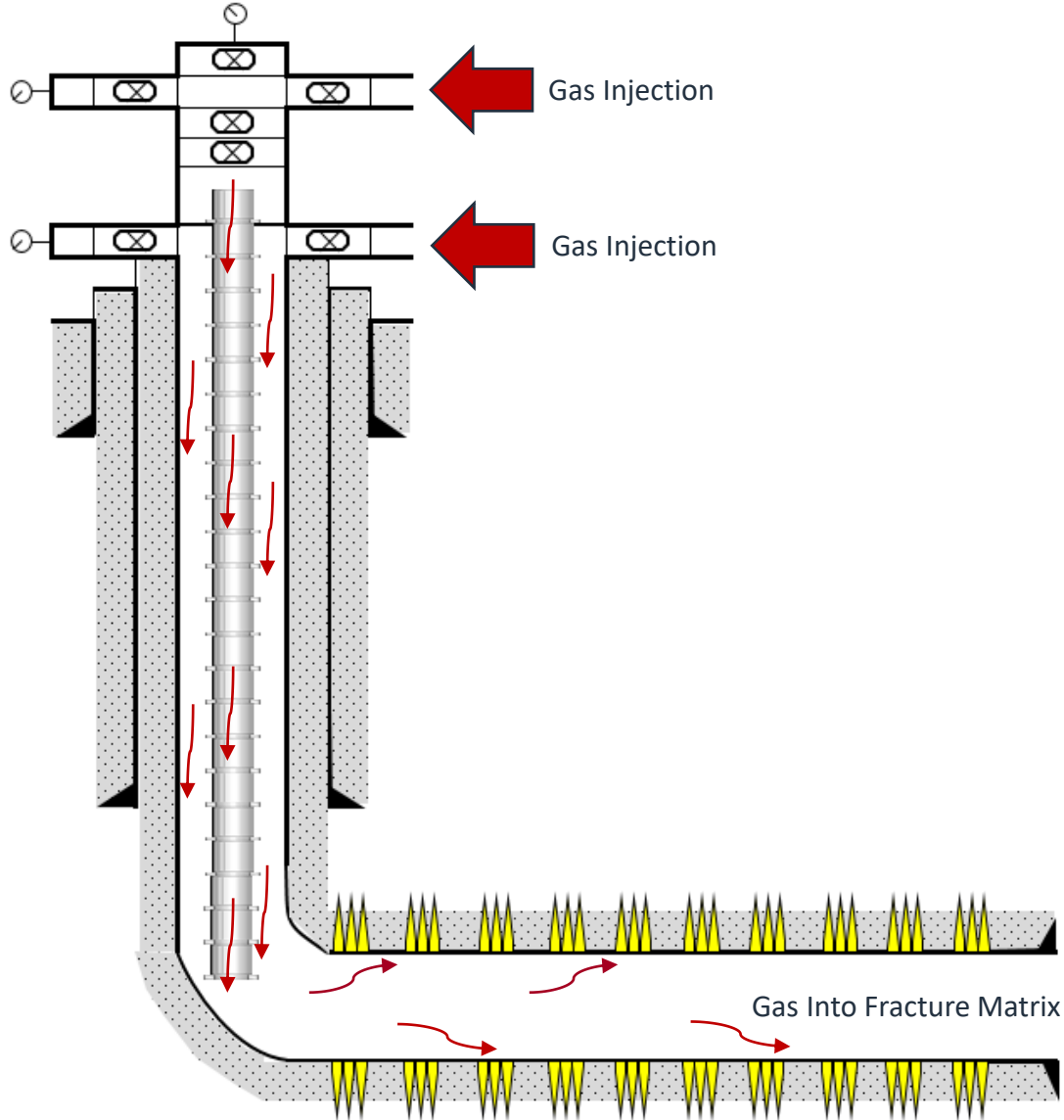


Once interruption is done, the stored gas is produced from the well back into our system, "closing the loop"

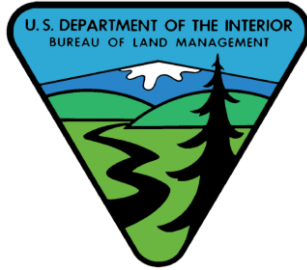
Normal Gas Lift Operation



Closed Loop Gas Capture Operation



We have the concept. Now what?



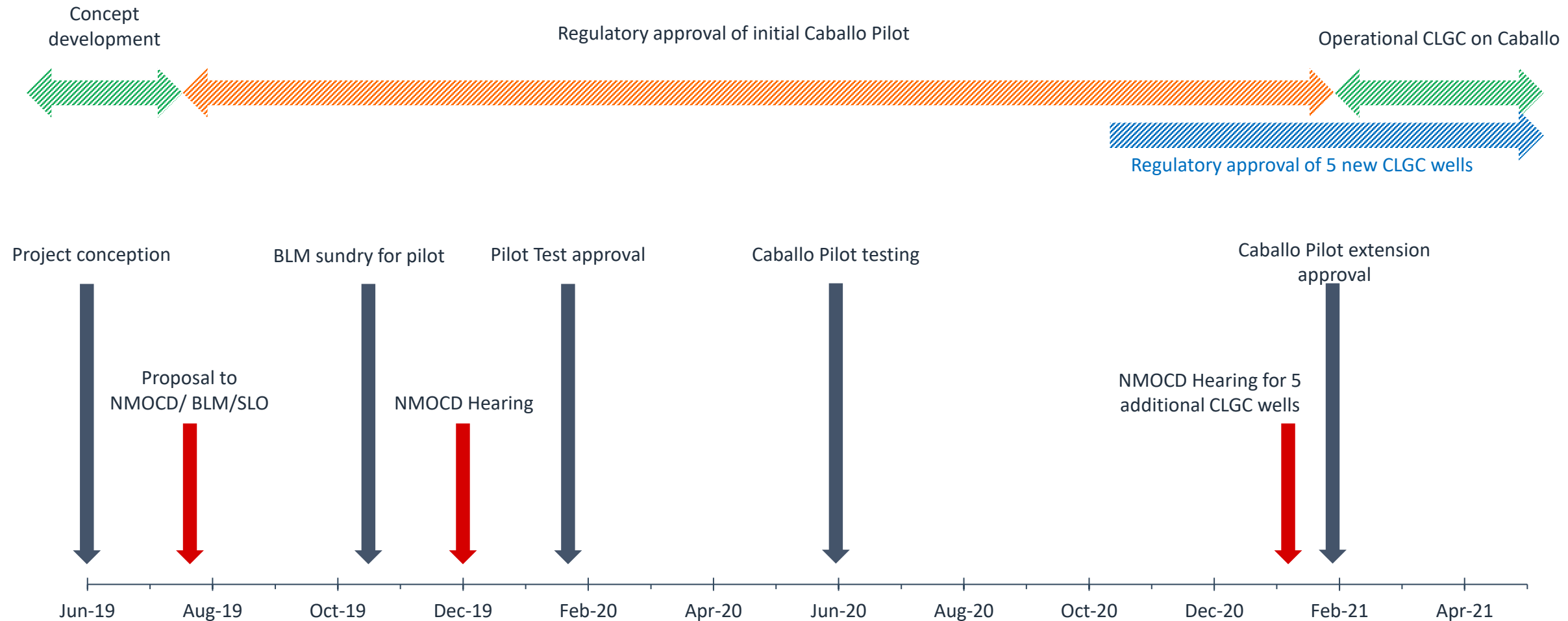
CLGC vs Storage Well

1. CLGC: low volume (5-15 mmscf)
2. CLGC: low injection pressure (1,100-1,300 psi)
3. CLGC: Not recovery focused
4. CLGC: Well normally producing. Injection short term/ temporary.

CLGC vs EOR, Pressure Maintenance, etc.

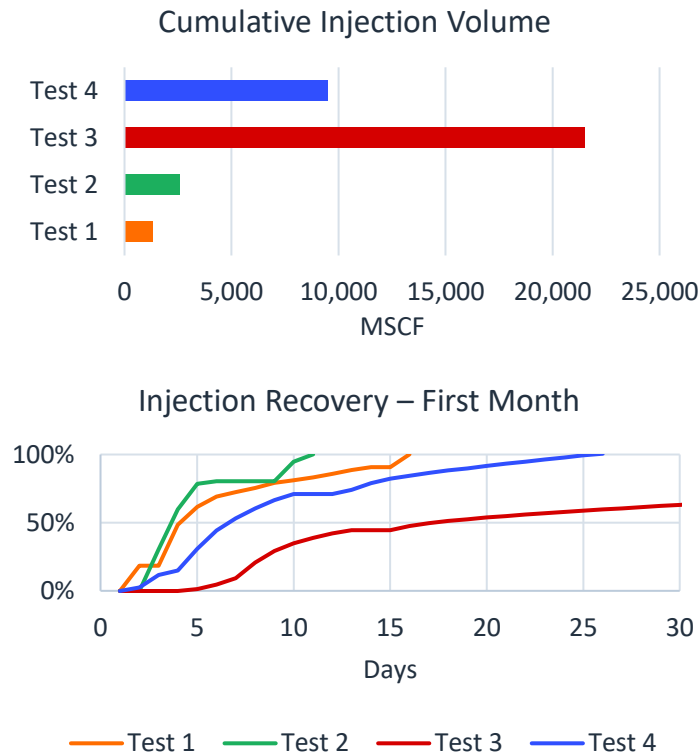
1. CLGC: low volume (5-15 mmscf)
2. CLGC: low injection pressure (1,100-1,300 psi)
3. CLGC: No attempt to affect reservoir/ increase production

From Concept to Permit: Getting it across the finish line



Pilot Test Results

Caballo 23 Fed #2H Pilot



Fantastic Results!

Test Summary

- Successful injection of rates and pressures needed to prevent most flaring events
 - 5-15 MMSCFD injection rate
 - Up to 21 MMSCF injection volume
 - Injection pressure ~1,200 psig
- High recovery profile (~100% in < 1 month)
- No negative effect on offset well production during CLGC cycle
- Successful automation and remote monitoring from Control Room
- Successful implementation of production allocation methodology

Impact to industry

- **Another tool to achieve 100% gas capture**
 - Targets unpredictable flaring out of operator's control
- **Industry wide application**
 - Scalable based on operator infrastructure and geology
- **Other operators permitting**
 - 6 non EOG project permitted or currently pending



Public response to CLCG – EOG is leading the way in industry



June 17, 2020: “EMNRD’s Oil Conservation Division Partners with EOG Resources on Flaring Reduction Pilot Test”



June 22, 2020: “EOG reports successful efforts to stem flaring in New Mexico”

Oil and Gas
Investor

January 6, 2021: “EOG’s ESG efforts”

HART ENERGY

January 6, 2021: “EOG engineers in Midland, Texas were pleased but not satisfied with the company’s 99.5% gas capture rate...the question, relentlessly was how to do it better. In this case, capture emissions.”

Questions?