Tackling Flaring: Learnings from leading Permian Operators

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Jennifer Stewart, Vice President Avitas
Jennifer.stewart4@bakerhughes.com
Avitas Sky: AI Enabled Detection and Quantification
Average Permian Basin natural gas flaring rate vs. top-tier operators interviewed

Findings: Three main themes facilitating best-in-class flaring performance

1. Strong governance structure coupled with leadership on environmental stewardship

2. Commitment to reduce or eliminate flaring by ensuring that wells do not go online until gas takeaway is in place

3. Best-in-class practices to ensure flare functionality and reduced vapor emissions
Governance and environmental stewardship

• Sharing best practices with other producers
• Establishing cross-functional working committees dedicated to reducing routine flaring
• Communicating flaring targets and progress against targets in group settings
• Conducting internal learning and technical conferences
• Making flaring intensity data transparent and visible to employees
• Setting aggressive flare intensity goals
  - Intensity-based; Absolute reduction targets; Year over year improvements; Public statements on appropriate level of flaring intensity
• Tying compensation metrics to flaring performance goals
The best flaring practice is to not flare at all

- Strategic leadership decisions requiring gas line be connected on all new wells, eliminating the need to flare associated gas in the first place
  - Infrastructure takeaway must be in place before well comes online, coupled with the willingness to shut in wells if the infrastructure is not in
- Takeaway not a barrier but constraint, i.e., a condition that needs to happen before a project is successful
- Planning, communication, commitment
- Strategic, long term partnerships with midstream
- Integrated business model (gathering, processing, compression)
Best operating practices

- Non-routine flaring necessary in the case of operational upsets, high gas line pressures or for safety reasons
- Utilizing trained staff or contractors to *routinely and frequently check flares* was cited as one of the best practices in terms of both operational efficacy and cost efficiency; in addition
  - Equipment and processes in place to ensure flare tips are lit and functioning properly
  - Emissions monitors and controls incorporated into facilities design
- **Pro-active, strategic** approach to manage operational upsets
- Use of *vapor recovery units* on majority if not all, pad sites with the intent of achieving maximum emissions capture efficiency
Beneficial financial impact of leading practices

• Financial statement impact
  – Protect cash flows

• Risk mitigation
  – Long term investment stability; social license to operate

• Access to capital markets
  – Facilitate access to capital markets, lower bank risk profile, possibly drive a premium to multiples
Thank you!