

METHANE FROM FLARING TOOLKIT



Can I identify a flare with a performance issue: Helicopter Optical Gas Imaging

Can I identify a flare with a performance issue? > Can I identify a flare with a performance issue: Helicopter Optical Gas Imaging

The use of helicopter mounted optical gas imaging (OGI) technology to identify unlit flares through the thermal signature of gas being emitted from the flare. The use of helicopters means that large areas, and large numbers of flares, can be inspected in a short period of time without the need for extended travel time between sites of interest

How it works

Gas emitted from an unlit flare reads to a localised drop in air temperature. This can be seen by as a black plume, allowing unlit flares to be distinguished from non-operational flare stacks.

Advantages



Cannot measure methane directly, only with leak detection and repair (LDAR) surveys



Requires a stable platform, such as a helicopter, to provide sufficient methods (e.g. satellites) to identify and locate specific methane anomalies



Non quantitative
Can cover large areas rapidly, allowing multiple flares to be inspected

Go Deeper

- [Permian Map project](#)

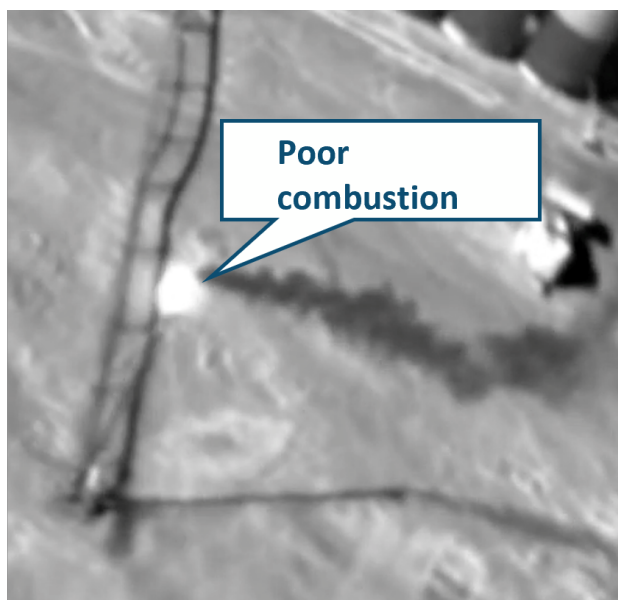
Case study

Permian Map Project

- Five surveys of over 1000 flares in 2020 –2021
- Preliminary results indicate ~7% of flares are unlit and venting and another ~5% have combustion issues.

The Permian Methane Analysis Project (PermianMAP) is an initiative that combines established data collection methods with state-of-the-art technologies to pinpoint, measure and report on oil and gas methane emissions in the Permian Basin. The results are made publicly available. It includes identification and analysis of methane from a variety of sources including flares. The use of helicopter mounted OGI cameras has identified methane plumes from different locations and sources, as shown in the images below.

Images courtesy of the Environmental Defense Fund.



[/nas/content/live/flaringmethane/wp-content/uploads/2022/02/methanebeforeAfter-1.mp4](#)

[OilandGasMethane \(2\)](#) [OilandGasMethane \(1\)](#)

Can I identify a flare with a performance issue?



Can I identify a flare with a performance issue: Satellite monitoring – Wide area methane emissions monitoring



Can I identify a flare with a performance issue: Optical Gas Imaging



Can I identify a flare with a performance issue: Point Sensors and Arrays



Can I identify a flare with a performance issue: Alarm systems – Image Processing



Can I identify a flare with a performance issue: Alarm systems – Acoustic Alarms