

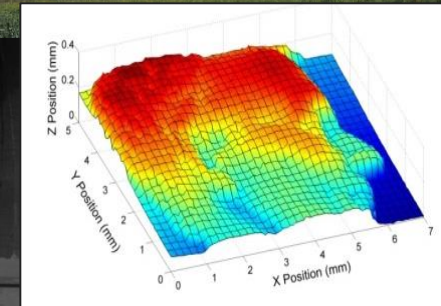
Gas Mapping LiDAR™



Next-Generation Aerial Methane
Detection and Quantification

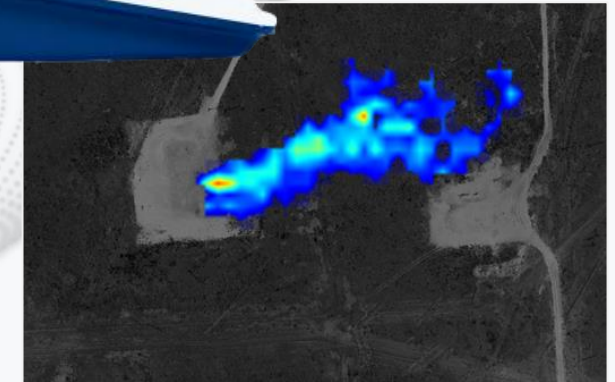
Background on Bridger Photonics

- Founded in 2006 as an optics company
- Based out of Bozeman, Montana
- Precision topographic LiDAR



Bridger's ARPA-E Funding

- DOE's Advanced Research Projects Agency-Energy (ARPA-E)
- Methane emission detection for oil and gas
- Gas Mapping LiDAR launched commercially in 2019
- Won an R&D100 Award in 2019



Previous Methane Detection Practices

- Requires grounds crews to drive to each and every site
- Scan every component
- Most equipment requires no action



GAS MAPPING LiDAR™

Emissions Reduction Made Simple.

Gas Mapping LiDAR sensitively images, pinpoints, and quantifies methane emissions from the air.



Our Mission



Enable clean, safe, and streamlined oil & gas operations by providing actionable data for methane emissions reduction.

Serving the Entire Natural Gas Value Chain

Production



Transmission



Distribution



The ExxonMobil logo, consisting of the word 'Exxon' in red with a red 'X' and the word 'Mobil' in red, set against a background of a large aircraft hangar with a biplane inside.

ExxonMobil

First and only alternate method application for EPA methane rule

CHENIERE

A graphic consisting of several blue, curved lines that sweep from left to right, positioned below the 'CHENIERE' text.

Evaluating emissions associated with full supply chain for certification



“SoCalGas has significantly exceeded the state's 2025 goal for reducing fugitive methane emissions ... in 2021 it **reduced fugitive methane emissions by 37%** – passing the state's goal of a 20% reduction by 2025...”

“The company's success comes from significant innovation in new detection technologies. SoCalGas was the first utility in the nation to implement **aerial methane mapping using helicopter-mounted LiDAR** technology to detect leaks.”

-SoCalGas Newsroom

Scanning the full SoCalGas service area annually

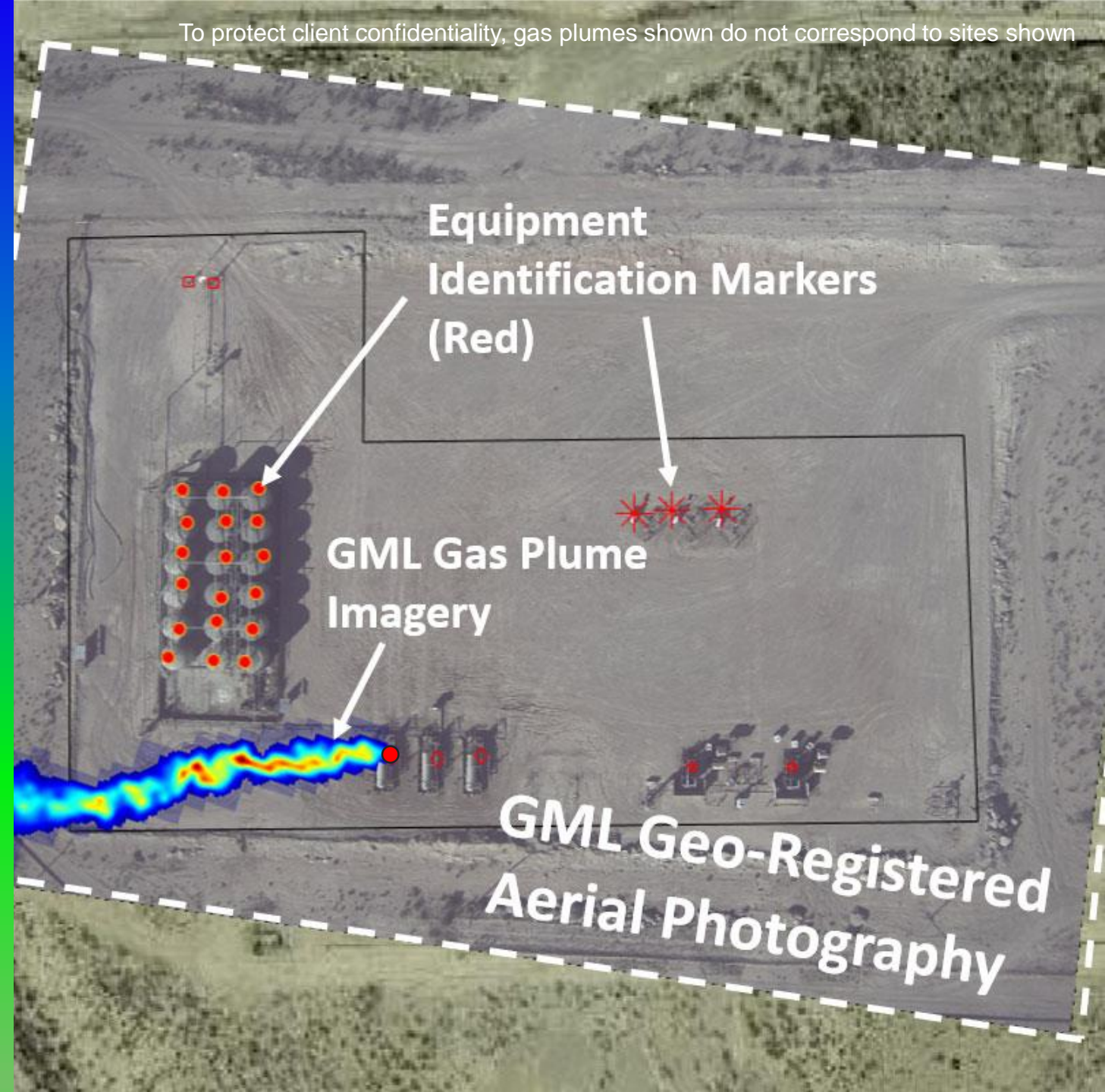
Actionability

- **Simple**

Crews connect instantly to the imagery and know right where to go with sub equipment-level resolution

- **Impactful**

Seeing the actual emissions makes them as important as a liquids spill



Sensitivity

Matt Johnson, Carleton Univ.

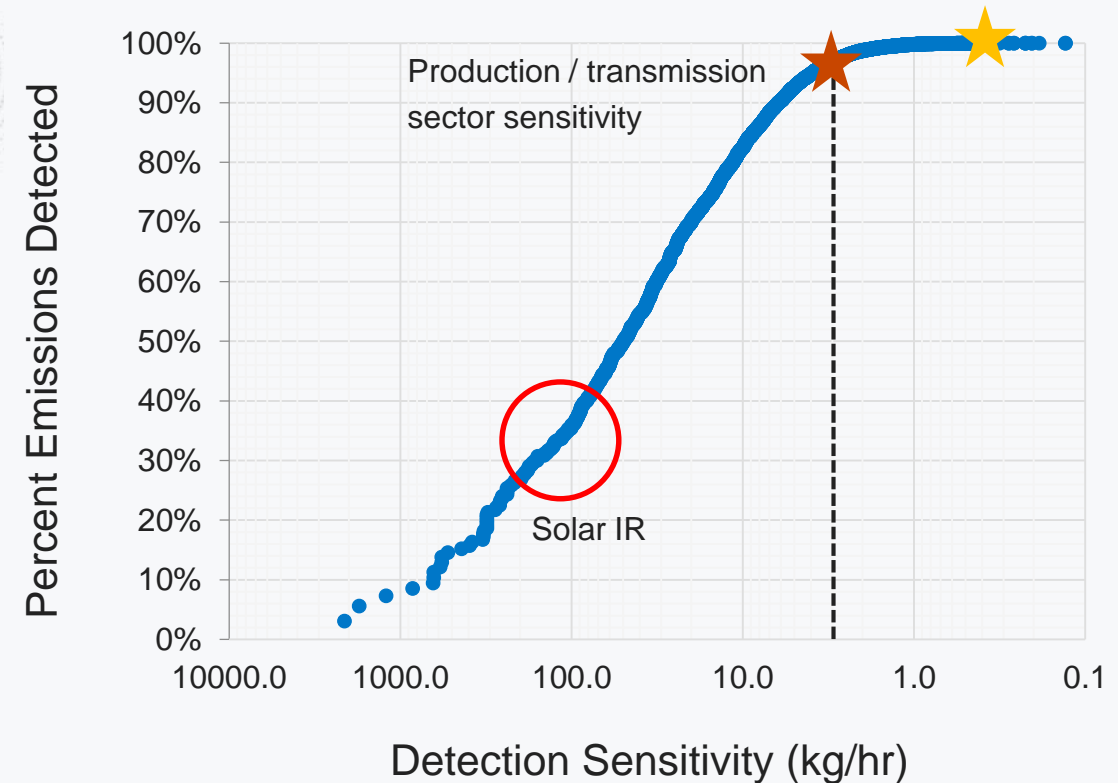
“... fifteen times more sensitive than [the competing solar infrared technology].”

Matt Kolesar, ExxonMobil

“At a minimum, we believe that Bridger Photonics was going to get at least 90% of the emissions from our assets.”

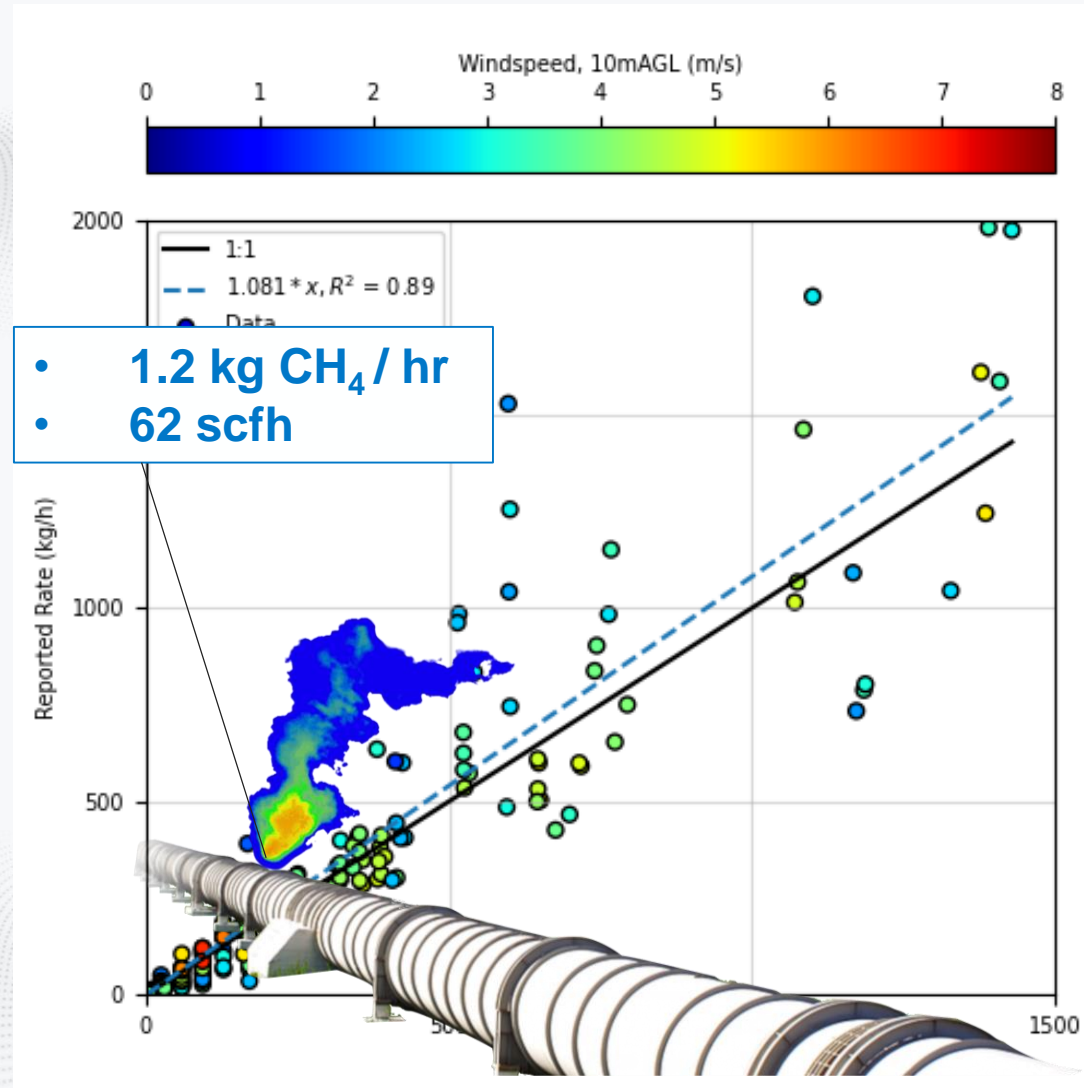
Pioneer Sustainability Rpt.

“... using a higher sensitivity technology allows us to ... understand the full picture of our methane emissions.”



Quantification Capabilities

- Accurate measurement-based methane emissions inventories
- METEC / Stanford study
- Aggregate error: 8.2%
- Sampling variance needs consideration



Regulatory Adoption

- The technology is ready today.
- The impact: Canada's Alt-FEMP
 - 77% reduction in measured emissions



Thank You!

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