



Vent Gas The Rules of the Game

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Our industry has made huge strides in capturing flare gas and placing this into a pipeline where it belongs – generating profits. Less progress has been made on capturing vent gas across the country, but the rules of the game may have just changed.

The primary reason more companies have not focused on vent gas is that it is very easy to dismiss. Even though it is regulated from an environmental standpoint, and it can be sold for \$6 to \$12 per mcf in today's market (depending on Btu content), it's invisible. Unless the gas has H₂S or other contaminants, you can't smell it. In the hierarchy of capital projects, the capture of vent gas isn't an incredibly high-profile project, and probably won't garner any young engineer an immediate promotion. In slow times there

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isn't enough money to focus on capturing the vent gas, and in good times there aren't enough people to put on "non-core" projects. "Core" is defined generally as those projects which result in more oil hitting the pipeline! It's fairly easy to dismiss a product that can't be seen, can't

For decades our industry has vented natural gas in the search for oil. Forty years ago, it is said you could easily read a newspaper at night from all the flares across the Permian Basin. My father tells me that the same holds true for the major oil fields in East Texas where he was a young petroleum engineer – as I'm sure it does for fields across the country.

Our industry has made huge

be smelled, and is usually only visible as a shadow on the ground at the tank battery.

But the rules of the game may have changed for our industry – and changed dramatically. Approximately two years ago a gentleman from a small company in Brady, Texas, introduced a patented process which configured an infrared camera to see a specific range of molecules – hydrocarbons. He partnered his process with the most prestigious infrared camera company in the world, FLIR. (These are the same guys who provide the satellite infrared cameras that allow you to watch bad guys walk from tent to tent in Afghanistan). The camera shows methane gas as either a white or black cloud (depending upon configuration), and the footage is truly eye opening. I'm very confident in stating that if industry executives, safety professionals, shareholders, royalty owners and environmental groups had been able to see this vent gas in this manner for the past 10 years, our industry would have a very different approach to capturing it.

An example of this technology's ability to impact priorities can be seen this year in Colorado. This past spring, a small group was selected to demo the camera at an oil production station north of Denver that included oil industry executives, state air emission regulators, and a representative of the EPA out of Washington, D.C. Following the review of a compressor station and pipeline manifold system, the camera operator happened to pan across the road to a condensate tank that was not part of the "tour." Less than three months later, the footage of the vent gas escaping from this condensate tank was being debated on the floor of the Colorado State Legislature.

The EPA executive's quote in the newspaper was that



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Just Changed

the vent gas, shown through the camera, “looked like an eruption of Mt. Vesuvius.” The lead editorial in the Nov. 16 edition of the *Denver Post* was titled “Rules needed to curb oil and gas emissions” – specifically targeting pending state legislation on condensate tanks that was a result of this footage. Seeing is believing, and the ability to see this gas is going to have a lasting impact on our industry.

Hy-Bon Engineering has helped our customers capture vent gas for 54 years in the Permian Basin and across the globe. We are pleased to announce a new service offered to help our customers to identify, quantify and rectify (IQR) methane emissions. This new IQR Service utilizes this new state-of-the-art camera to identify all gas emissions across a location. We provide a comprehensive report denoting all gas emissions. Typical gas emissions include those from oil stock tanks, separators not tied into pipelines, vented wellhead gas, compressor leaks, dehyds and leaks in valving and other production equipment. In addition, Hy-Bon can quantify the gas streams and recommend the best technical solution for eliminating each and placing this lost product into a gas pipeline. Finally, we offer the best equipment in the industry necessary to capture the gas, rectify the problem, and begin producing a new revenue stream.

The Win-Win Proposal

In the Permian Basin only, Hy-Bon is offering a very unique proposal. Companies have different reason for not capturing this gas, from “it’s not in this year’s budget” to “the field guys don’t want another piece of equipment to look after.” In order to address these concerns and allow our customers to move forward on gas capture projects, Hy-Bon Engineering is offering a program which includes the gas compression equipment, installation of the equipment, and monthly maintenance of the equipment in return for payment from the gas stream captured. Programs vary based on the pipeline pressures involved, and the quantity and nature of the gas.

The program is limited to areas with access to pipeline pressures less than 150 psig, with commercial quantities of sweet gas. In most cases, the operator can own the equipment and the installation in less than 18 months – with a

At right:
Tank battery
as seen by the
naked eye.



At left:
Tank battery as
seen with FLIR
infrared camera
showing a plume
of natural gas
billowing and
sinking to the
ground.

proven revenue stream that can be dropped straight into the financials. You can install the equipment at no cost, operate it at no cost, and pay for it entirely from the gas stream that otherwise would be vented to the atmosphere during the time frame of the payout.

Vent gas on location is bad business. It produces an unsafe work environment, as well as representing millions of dollars of lost product for our industry. Most importantly, it has a major negative impact on air quality and represents the waste of an important natural resource for our country in the form of clean burning natural gas. With the technology now available to easily see these “spills in the air,” the ability to neglect this gas will probably cease to be an option in the near future.

We strongly believe that our company provides unparalleled value and experience in the technology of capturing the low pressure, often wet gas that is vented on locations across our region. If your company is interested in identifying gas across locations and working with an experienced partner to capture this gas in an economic manner, we would be honored to work with you in this important endeavor.

For more information, please contact Hy-Bon at 432-697-2292.

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