Hy-bon Engineering Company
Methane Leak Detection & Measurement Technologies

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HY-BON Engineering
Step 1 – Know where to look

- Four Major Areas of Vent Gas
  - Pneumatic Devices
  - Compressor Stations
  - Casinghead Gas
  - Oil & Condensate Storage Tanks

90 / 10 RULE
Identification of Leak Sources

- Identification
  - Acoustic Detectors
  - RMLD (Infrared Detection)
  - FLIR GasFinder Camera
The RMLD is a laser based technology which allows us to identify emission sources on installations and pipelines.

The RMLD is effective up to 100 ft from the emission source.
Spills in the Air – Oil Production

- Identification
  GasFinder
  Camera
FLIR GasFinder Camera

The FLIR’s GF320 & Gas Find IR Cameras allows us to visually identify and document the emission sources.
Spills in the Air – Oil Production

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Restricting Back pressure holds back the flow of Hydrocarbons into the well bore.

Back pressure is relieved from the face of the formation allowing more hydrocarbons to flow into the well bore.
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Measurement Technologies

- Minor Leaks
  - High Flow Sampler
- Major Emissions
  - Turbine Meters
  - Ultrasonic Meters
  - Insertion probes
- Awkward Equipment
  - Calibrated Bags
Spills in the Air – Oil Production
Spills in the Air
– Oil Production
Oil Storage Tank – 24 hour emission test utilizing a turbine meter capable of downloading data to a PC
Using the Ultrasonic Meter

Ultrasonic meters and insertion probes can be used to accurately measure extremely large volume vent sources. Our company has been able to provide accurate vent gas measurements as high as 1.8 MMCF/D with these instruments.
The GAS Kit was developed to capture a vapor samples from the storage tanks in order to obtain a quality sample for analysis using gas chromatograph.

The GAS Kit collects a pressurized vapor sample up to 60 PSI allowing for a proper analysis.

An accurate gas analysis is THE foundation for proper design of any form of recovery or control equipment.