



# RESTORING FULL PRODUCTIVITY WITH CHEVRON INDUSTRIAL

“ The Chevron team discovered the cause of the emulsions and provided a cost-effective solution. ”

*Operations Manager  
Petroleum/natural gas  
exploration company, Texas*



Emulsion sample



Gas compressor station

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## The Challenge

A petroleum and natural gas exploration and production company was experiencing lost revenue and higher-than-average maintenance costs as the result of significant non-productive time due to accumulation of emulsions in compressors, separators, storage tanks, and other gas gathering and processing infrastructure. Unhappy with lubricant solutions and support offered by its incumbent provider, the company turned to a Chevron Lubrication Marketer for help in resolving emulsions issues and restoring full productivity.

## Investigation and Site Assessment

A Chevron team of experts completed site visits utilizing the Best-in-Class site assessment tool to understand how factors such as gas quality, environment and equipment were affecting the situation. The team determined that liquids and vapors in the gas stream were reacting with dispersant and deposit control additives in the natural gas engine oil used in the compressor cylinders, resulting in emulsions. Site visits further revealed that configuration of the plants and booster stations varied, requiring either time-intensive and costly reconfiguration or an innovative solution capable of eliminating emulsions issues.

## Solution

To minimize the cost of change and impact on operations, the Chevron team implemented a two-step solution tailored to the company's unique operational challenges:

- 1) To address emulsion issues and satisfy OEM recommendations, all compressor frames and cylinders were converted to non-emulsifying lubricants. In locations where plumbing for two lubricants existed, Regal® R&O 150, which has demulsifying properties that allow quick release of moisture, is used for compressor frames and cylinders. HDAX® 5200 EF SAE 40, a unique industry solution premium quality dispersant/detergent engine oil designed with emulsion-breaking technology to reduce disruptions in gas transmission and process operations while providing outstanding engine and compressor cylinder lubrication, is then used in the engine without concern of forming emulsions.
- 2) To ensure lubricant supply in remote locations, a tank monitor was installed. This solution enables the company to efficiently manage inventory, prevent supply interruptions and, through the use of a leak alert system, address potential health, safety or environmental issues.

## Results – Reduced Maintenance Costs and Increased Profitability

Impressed by the Chevron team and their ability to provide solutions that minimize the impact of certain plant designs, while taking into account the total cost of ownership and asset protection concerns, the company has implemented all recommendations with direct support from Chevron. Emulsion related shut-downs have been eliminated and the company expects to minimize maintenance costs, reduce non-productive time and increase profitability.

Important: OEM requirements for compressor cylinder lubrication depend on gas properties and maximum pressure. OEM requirements should be reviewed for gas and maximum pressure specific to the installations.