

# PureMark™ B800 Carbon Dioxide Scavenger Enables Commercialization of Natural Gas in Oklahoma



An operator in Stephens County Oklahoma had a new “artesian” well not producing oil yet. At the time of the trial the well was producing natural gas (NG) and water. The NG had to be flared production despite access to NG pipeline.

Flaring was performed because the NG contained carbon dioxide (CO<sub>2</sub>) at levels exceeding the maximum allowable percentage for the pipeline of 3%.

To enable NG commercialization, the CO<sub>2</sub> levels had to be reduced.

The trial well has been producing 300 - 365 MCF of NG per day. The CO<sub>2</sub> concentration range in the NG was 3.8% - 3.9%.

Foremark Performance Chemicals developed PureMark™ B800 CO<sub>2</sub> Scavenger that exhibits high affinity and reactivity with CO<sub>2</sub> in NG streams.

This unique, patent pending technology was engineered to separate from the gas stream and form a water soluble light oil. The viscosity of the oil can be reduced as needed.

PureMark™ B800 CO<sub>2</sub> Scavenger was injected via a general purpose spray nozzle into the gas stream after the low - pressure separator at 80 psi and 150°F.

At 90 gallons per day, the product lowered the CO<sub>2</sub> level in the NG to 2.8%. This concentration level has been maintained constant and thus the NG was brought into compliance for pipeline concentration.

## Key Benefits

- ❖ Allows operators to take their natural gas from flare to pipeline.
- ❖ Provides CO<sub>2</sub> scrubbing when an amine plant is not available.
- ❖ Reduces waste and impact to the environment.

## The Challenge

- ❖ Reduce CO<sub>2</sub> level of the NG to achieve pipeline specification and enable its commercialization.

## Solution & Results

- ❖ 90 gallons of PureMark™ B800 CO<sub>2</sub> Scavenger per day lowered CO<sub>2</sub> level from 3.9% to 2.8% in a 365 MCF a day NG stream.
- ❖ Foremark Performance Chemicals has been continuing technology development to increase scavenging activity of CO<sub>2</sub> from NG.