

## Foam Control for Natural Gas Wells

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As our domestic natural gas wells decline, more and more efforts are being made to get more and more needed gas to the surface. The projected natural gas needs for the United States will be several times current production in the coming years.

Of the wells being discovered and produced today, most produce varying amounts of water. As more and more water comes into the wellbore of these wells, stronger and more reactive foaming agents are required to get the water to the surface.

There is a new family of foaming agents available that work in high temperature wells, high chloride concentrations and in the sizeable presence of hydrocarbons. While these foaming agents are very effective, in many applications they are so effective, the foam they produce survives the separation process at the surface and continue on into the gas measurement piping and down the sales lines. Where compressors are onsite, these foams have been blamed for aggravated corrosion problems and compressor damage. The gas purchasers have recognized this problem and have shut in wells in some areas.

The purpose of the proposed research is based on two approaches.

The first one is to research, study, test and identify a chemical compound that is capable of "breaking" a new family of foaming agents being distributed by all major oilfield chemical companies.

The second is to design an injection system that maximizes effect and minimizes volumes.

This system is currently needed and will be applied upon availability.