The Truth About Hydraulic Fracturing

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What is Hydraulic Fracturing?

Despite what you may have heard, hydraulic fracturing (often called “fracing” and incorrectly written as “fracking”) is not a drilling process. It’s a procedure that takes place after the drilled hole, or wellbore, is completed. In fact, the hydraulic fracturing process does not even occur while the drilling rig is on location.

As you can see on the front of this issue, the aerial photograph of the Heitzenroder pad site shows that most of the equipment present during the completions process are water trucks and hoses. It should be noted that site was fully tarped in black plastic for environmental protection purposes.

Put simply, hydraulic fracturing is the use of fluid and material to create or restore small fractures in a formation in order to stimulate production from new and existing oil and gas wells. These fractures are very small - so small in fact that they are propped open by granules of sand, called proppant. This creates enough space to release the natural gas trapped in the rock and allow it to safely rise to the surface within the self-contained system.

Fracing...Safe And Effective for Over 60 Years

Since hydraulic fracturing was first introduced commercially in the 1940s, the process has been successfully used in over 1 million producing wells. Today, fracing is used in a majority of U.S. oil and natural gas wells to enhance well performance, minimize drilling and recover otherwise inaccessible energy resources. Today’s wells can access over 60 times more below-ground area and retrieve the same amount of gas while producing 30% less waste than a decade ago.

In fact, 90% of all natural gas wells drilled in America use fracing to increase production, and there has never been a single case of groundwater pollution caused by the underground fracing process. That’s not only due to industry safety precautions, but also because of the basic properties of the depth of rock layers.
Why is Fracing So Important?
The fracing process is essential to developing the clean-burning natural gas resources of the Marcellus Shale. That’s because the formation exists a mile or more below the surface. These depths plus the solid or “tight” nature of the shale make the gas trapped in the formation difficult to develop. Successful wells must produce a large amount of natural gas to justify the time, effort and expenses involved in creating and maintaining them.

Water Use in the Hydraulic Fracturing Process

Water is a necessary part of the fracing process as it acts as a carrier fluid for the propping agents (grains of sand) used to prop open the tiny channels created to induce the flow of natural gas out of the rock formation.

The hydraulic fracturing process requires the greatest amount of water when drilling and completing a natural gas well. Cabot uses approximately 3,990,000 gallons of water in our Susquehanna County wells – approximately 3,780,000 gallons of that is used for fracing. While this may seem like a lot, it’s equal to a mere 5.5 minutes of water usage in New York City.

Cabot also utilizes a closed-loop system to recycle up to 100% of the water used in our operations – including hydraulic fracturing – for use in later operations. This greatly reduces the volume of fresh water taken from local rivers and creeks while eliminating the need for open fluid pits.

A Key Part of America’s Energy Future

America’s energy demands are continuing to grow at a tremendous pace. At Cabot, we believe it’s essential that America do all it can to develop domestic energy resources to reduce our dependence on foreign energy. That’s why hydraulic fracturing plays such an important role in homegrown energy production. Without hydraulic fracturing America would lose close to half of its natural gas production. That’s too significant to ignore – especially since the fracing process has been proven so safe and effective for over half a century of oil and gas exploration.
Serving as Cabot’s Completion Manager, Jim draws on years of engineering experience and expertise to coordinate and oversee best practices used in the hydraulic fracturing of well sites throughout Susquehanna County.

The position calls for daily communications with Cabot’s staff of Completion Engineers, Water Engineers and Well Site Supervisors to properly design and manage multiple well site operations. Regular engineering reviews ensure that the more than 100 individuals working at well sites on any given day are following state and federal standards.

By working with Cabot’s drilling, production, land and geology specialists, the Completion Manager helps make sure the hydraulic fracturing procedure is performed in a way that’s efficient, effective and environmentally safe. Only then is it deemed a success.

Jim says he loves the friendly, hardworking people and beautiful landscape of Susquehanna County. And wants everyone to know that “the hydraulic fracturing process is managed by professionals like myself. We enjoy the outdoors and are dedicated to protecting the environment for the future generations to come.”