Quest News

Delving into fracking

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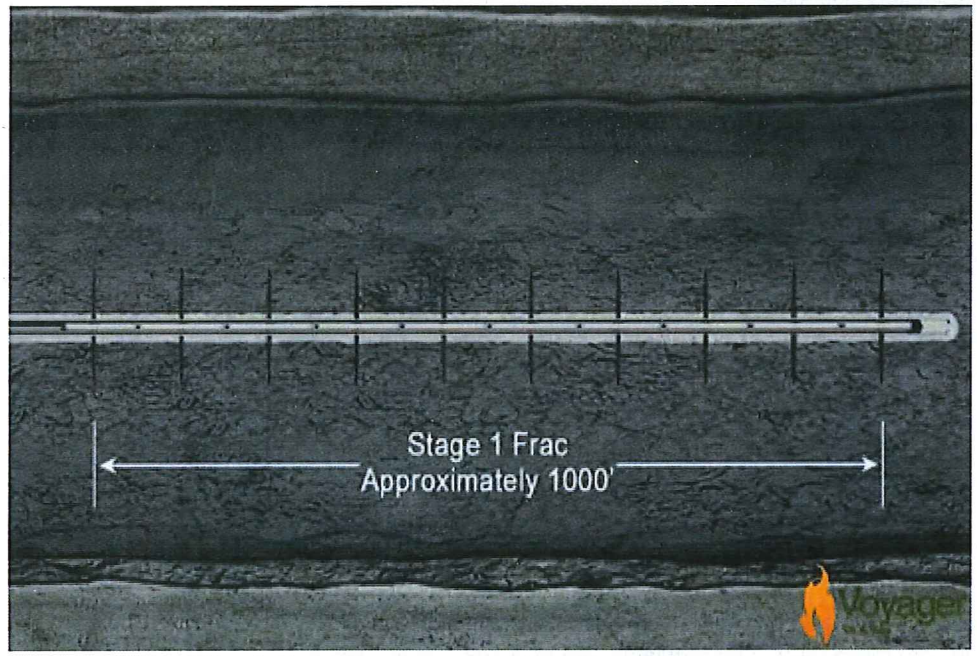

Photo provided by Multimedia Resources.

Some energy issues attract debate like a lightning rod, and spark questions. Welcome to hydraulic fracturing, or fracking. DTE Energy supports the responsible, safe development of non-traditional shale resources using hydraulic fracturing in Michigan and elsewhere.

When it comes to fracking, opinions above-ground seem as divided as the vein-like fissures underground in the shale. While some groups want to prohibit or severely limit natural gas production, a more prudent approach has been taken by other groups, including The Environmental Defense Fund. The Fund is working with industry groups on best practices for fracking.

Hydraulic fracturing has been used for more than 60 years to enhance gas production from traditional vertical wells. The process is common practice in the industry and, when used properly, safe for the environment. The recent use of this technology in deeper, horizontal wells has opened vast new gas reserves to economical production. This has resulted in an increased supply of domestically-produced natural gas and lower natural gas prices.

Hydraulic fracturing extracts natural gas from very tight formations. Once fractures in the shale are enhanced or created through explosive charges, freshwater mixed with sand and traces of chemicals is injected at a high rate of pressure into these tight formations to keep the fractures open. This allows the natural gas to escape into the well and to be collected at the surface. Click here to view a fracking video by Voyager Oil and Gas.

Fracking has received a fair share of negative publicity on a range of topics and we thought it

might be helpful to set the record straight:

- Opponents, including some environmental groups worry the chemicals used in hydraulic fracturing could taint aquifers and water supplies. In New Jersey, Gov. **Chris Christie** has instituted a one-year moratorium on drilling. In Texas, Gov. **Rick Perry** signed a law requiring companies to disclose the chemicals and their amounts used in fracking, beginning this month.

  Response: The oil and gas industry is supportive of chemical disclosure through voluntary means, such as FracFocus.org, or as required by specific state programs. In Michigan, the Department of Environmental Quality (DEQ) requires a Material Safety Data Sheet (MSDS) to be submitted to the DEQ and the data is then posted on the department website.

  Many companies do not "publicly" disclose the chemicals used during the process, primarily to protect proprietary information from competitors. However, producers have no problem providing the information to regulatory agencies.

  Pete Cianci, president, Gas Storage and Pipelines, notes, "It appears that varying reporting requirements are being proposed on a state-by-state basis. There is a lot of rhetoric around fracking and water contamination. In my opinion, the real issue isn't about fracking. The real focus should be on what happens to water when it gets back to the surface. This should apply to the everyday use of water; we all want to ensure that it is properly treated, disposed of, or reused in the fracking process. We are committed that drinking water sources and our rivers and streams remain protected. Therefore, we should apply the same vigor around how all manufacturing wastewater is being treated. I do not believe we need separate regulation for wastewater related to drilling, but need a common set of rules for all water usage."

  A Texas perspective comes from **Steven Prelipp**, president, Gas Resources. He oversees DTE Energy's sole fracking operations, which are in the Fort Worth basin in and near the Barnett shale formation. Prelipp says, "Most of our employees live on top of the Barnett shale and many of them have well water. I have in the past asked them if they've had any issues with their water supply and no one has ever seen or heard of any instances of contamination. And this area has been under development for roughly 100 years."

  According to Prelipp, our company made its first investments in the Barnett shale in 2004, and currently has 85,000 net acres under lease there. At the location, DTE has a staff of 35, and owns and operates approximately 230 wells, all of them fracked.

  Prelipp, who says 99.9 percent of the fracking mixture is sand and freshwater, points out that environmental precautions are taken daily. "Our regulatory group in Texas is the Texas Railroad Commission," he says. "The commission requires that we double-case (add protection) across all freshwater zones. They tell us how deep to set the casing and they check. We recycle water that meets the standard and we dispose of the more briny water in deep disposal wells, which the commission also oversees. There is over a mile of separation between the freshwater zones and the fracked production or disposal zones. Freshwater aquifers are at about 200-500 feet below. The fracking happens at 5,500-6,500 feet down and the disposal wells are 7,000 plus feet underground."

  Natural gas actively moves around in nature to lower pressure within the earth. It seeps upward, where it sometimes moves into aquifers even where there is no active drilling. Prelipp says, "When you see in some areas that water coming out of a faucet can be set on fire, it's important to note that this effect was around before fracking. The gas exists there naturally, and it will be there whether fracking is currently occurring in the area or not."

  Prelipp offers an industry perspective, "Fracking is nothing new. The difference now is that the easy-to-get hydrocarbons in permeable reservoirs have long been exhausted. Fracking is now and has been for many decades imperative to recovering hydrocarbons. I would estimate that over 90 percent of all gas and all oil wells are fracked currently."

  Michigan petition drive
  The anti-fracking citizens group, The Committee to Ban Fracking in Michigan, tried but failed to put a statewide ban on the Nov. 6 General Election ballot. The group, which would have needed 322,609 valid signatures by July 9, wanted an amendment to the state Constitution to ban hydraulic fracturing. The effort yielded 21,000 signatures; the group intends to seek

its goal for the 2014 ballot.

Response: Our company opposed the proposed ban. Michigan has significant experience in managing oil and gas production. Over 9,000 wells have been drilled using the practice in Michigan's Antrim shale formation. Michigan has comprehensive laws and rules, enforced by the DEQ, that regulate hydraulic fracturing as well as every other aspect of oil and gas drilling and production. The DEQ has not found any cases where fracking has caused adverse impact to the environment or public health in Michigan.

"Our economy needs energy," says Prelipp. "It's a blessing to have a bountiful supply of natural gas as an affordable and clean energy supply and it's a huge benefit that the U.S. is self-sufficient in this fuel. Currently, the U.S. has no other energy supply that can take its place or compete with its economic viability."

Sierra Club opposition
In May, the Sierra Club, which had been a longtime supporter of clean burning natural gas, did an about-face and began its "Beyond Natural Gas" campaign, which has an anti-fracking focus. This expands the Sierra Club's work against natural gas production by integrating the "Beyond" message with those opposing the other major fossil fuels: oil and coal. **Michael Brune**, Sierra Club's executive director, said, "As we push to retire coal plants, we're going to work to make sure we're not simultaneously switching to natural gas infrastructure." Brune cited an "emerging reality that the climate impact of gas is much worse than we thought, and the availability of renewables is much better than we thought."

Response: According to Cianci, "Natural gas is a great way to keep modern society progressing and to keep power prices reasonable. The U.S. is now in a position to produce more gas and oil and take a step closer to energy independence."

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