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TOO MUCH AT STAKE TO SHUT DOWN FRACING

August 1, 2012



BHP Billiton Petroleum, one of the major lease holders in the Eagle Ford, has 26 rigs working and is planning to ramp up to 300 Mboe/day, with 150 Mboe/day of liquids, over 5 - 7 years.

Photo courtesy of BHP Billiton Petroleum

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Nothing better illustrates the extremes that opponents of hydraulic fracturing will go to than the deception noted by Texas State District Judge Trey Loftin on Feb. 16. His comment came in an order he entered in the Parker County (Texas) case of Steven Lipsky against Range Resources, a Fort Worth-based exploration and production company.

Lipsky, the landowner, alleged that Range's gas well contaminated his water. Emulating the movie "Gasland," Lipsky showed a sensational video of ignited gas coming out of a garden water hose.

"The Court references with concern the actions of Mr. Steven Lipsky," wrote Judge Loftin, "under the advice or direction of Ms. Alisa Rich [his environmental consultant], to intentionally attach a garden hose to a gas vent—not a water line—and then light and burn the gas from the end nozzle to the hose. This

regulatory developments related to the practice of hydraulic fracturing in completing wells.

Fracing has been around since the 1940s and thousands of wells have been safely fraced. Only recently have the news media been filled with stories about giant investments in leases, widespread drilling, and revival of rust-belt towns. The media report on everything from heavy traffic and prostitution at labor camps to more serious concerns with air, water, and noise pollution.

Fracing correctly applies to one small but important part of shale drilling, well stimulation. Fluid is injected at very high pressure into shale rock holding oil and gas. The fluid makes tiny fractures in the shale that make it possible to extract oil and gas.

Frac fluids generally consist of 90% water, 9.5% sand or ceramic, and 0.5% chemical additives—anything from traces of sodium chloride (salt) and citric acid (lemon juice) to guar gum (a thickener in cosmetics) and glutaraldehyde (a disinfectant). Fracing is usually performed thousands of feet below the surface, far below usable groundwater aquifers. There is no known case of groundwater contamination definitively caused by hydraulic fracturing.

It is estimated that more than 800 trillion cubic feet of gas is trapped in shale formations in the continental United States, ranging from North Dakota and Montana to Texas and the Southwest, and in the Northeast and Mid-Atlantic states. In February, the US Geological Survey (USGS) said that Alaska's North Slope shale formations could hold up to 2 billion barrels of oil and 80 trillion cubic feet of gas. Shale plays also occur outside the US, including in Israel and Poland.

President Obama, noting that development of natural gas supplies could last nearly 100 years and create more than 600,000 jobs by the end of the decade, has said, "My administration will take every possible action to safely develop this energy." Yet many in the oil and gas industry fear that his administration's actions will not be consistent with its words.

Proponents say fracing will open up vast new domestic reserves; wean us from dependence on foreign oil; shift energy consumption from dirty sources to natural gas; create thousands of jobs; and pose no environmental risk.

Meanwhile, fracing opponents' biggest fear is that fracing pollutes groundwater aquifers. They also assert that fracing creates air and surface water pollution; causes earthquakes; and consumes large quantities of water, especially in areas with limited water supplies.

The regulatory system

Regulation of the oil and gas industry is mostly left to the states, although there are some federal laws on the books now and others being debated and developed. Some smaller, newer, independent gas players are not fully aware of rules and regulations. For instance in Texas, some think that if they follow rules of the state Railroad Commission (which regulates oil and gas in the state) they will be in compliance. They fail to realize that the Texas Commission on Environmental Quality regulates air quality. Thus, some rigs using diesel-powered equipment and some condensate tanks have faced air quality citations.

At the federal level, fracing is subject to the Clean Water Act, which regulates surface pollution discharges, the Clean Air Act, which regulates air pollution, and, to some extent, CERCLA, which regulates hazardous waste sites. Other federal statutes also apply to oil and gas drilling.

Fracing opponents frequently reference the so-called "Halliburton Loophole" because Congress expressly exempted oil and gas drilling from the Safe Drinking Water Act in the 2005 Energy Policy Act. The truth is there is no "Halliburton Loophole." The Safe Drinking Water Act was never meant to regulate oil and gas activity, and the 2005 Energy Policy Act just made this fact expressly clear after a court decision held that the act regulated fracing when the issue came up in a coalbed methane development.

Proposed laws

The proposed FRAC Act aims to strip this alleged loophole and bring fracing under the Safe Drinking Water Act. Additionally, the proposed BREATHE Act would amend the Clean Air Act to make tougher pollution controls for the oil and gas industry. Given the intensely partisan debate over these measures and the general atmosphere in Washington, it is unlikely that either of these bills will pass before the 2012 elections, but it is worth knowing that they've been proposed and have strong support.

The Environmental Protection Agency

EPA has been very busy with fracing issues and has flubbed two recent high-profile investigations—the Pavillion probe in Wyoming and the Range Resources investigation in the Barnett shale near Fort Worth. In fact, the deceptive Lipsky garden hose video prompted the EPA's probe in the latter.

During both of these investigations, the EPA tried to pin groundwater pollution on fracing, but both times it quickly came out that the investigations were flawed, and the EPA had no proof to tie fracing to water contamination. In fact, in both places, the groundwater has always been notoriously bad, and problems with the water pre-date oil and gas activity. In Pavillion, for example, USGS reports from the 1880s discuss the poor water quality around Pavillion.

In addition to these probes, the EPA has launched a comprehensive study on the effects of fracing on water supplies. The study will focus on water acquisition, well injection, wastewater treatment, and waste disposal. For the study, the EPA is examining five old sites in North Dakota, Texas, Pennsylvania, and Colorado, and two future sites in Louisiana and Pennsylvania. The agency hopes to complete its work this year with a report out by 2014.

In addition to the frac fluid disclosure requirements, there are numerous other state regulations that ensure the safety of fracking. Many of the regulations do not specifically address fracking, but they protect against any risk of harm from fracking. These regulations include general permitting rules; requirements for adequate pollution controls; and well casing requirements to ensure that gas does not escape from the well bore. Additionally, there are requirements on well testing; water withdrawal, disposal and recycling regulations; and state water and air quality regulations.

Recently new impact fee statutes have appeared. One just went into effect in Pennsylvania, requiring a fee of \$40,000 to \$60,000 per well to help counties deal with the costs of such things as increased truck traffic and road use.

While the cost of drilling and fracking a well can vary from \$400,000 to several million dollars, the impact fee is a significant sum and might discourage some operators from drilling.

Some local communities have tried to ban or limit fracking through zoning laws. This will become controversial, especially in places with no culture of oil and gas drilling, like New York and Ohio. Some states have expressly preempted local zoning laws, saying that all oil and gas development decisions must be made on the state level. Other states, however, seem to have left these decisions to municipalities and local governments. For example, two recent trial court cases in New York refused to overturn local zoning bans on oil and gas drilling, holding that state law does not preempt the local laws. These decisions will likely be appealed, perhaps significantly affecting oil and gas development, especially because much of the new oil and gas drilling is taking place in populated areas.

Pipelines are necessary to transport the gas. With these new zoning rules, pipelines cannot be built over areas with bans in place. You might be able to drill, but you cannot move the oil or gas to market. In the early days of electric power distribution, rampant shakedowns by local politicians of power grid developers led to statewide regulation of the electric power business—at the insistence of many in the industry.

States have regulated fracking through local and administrative statutes and ordinances. Fracking is loud, so some places adopted regulations limiting noise to a certain decibel level or to a certain level above the average ambient noise in the area. Other jurisdictions limit fracking to daylight hours or require wells to be set back a certain distance from other development and from roads.

The situation in New York is a mess. A state moratorium on fracking will remain in place until the Department of Environmental Conservation (DEC) comes up with new standards and the state legislature enacts the standards.

The DEC predicts that if and when the moratorium is ever lifted, it will receive 1,700 to 2,500 applications to drill per year, stimulating economic activity and creating thousands of jobs largely in economically depressed Western New York. That is, unless a patchwork of local zoning laws or regulations banning fracking makes it impossible to drill economically or to move shale gas to market.

In response to intense pressure from environmental groups, the DEC spent four years coming up with draft fracking regulations. The DEC, touting them as the nation's most restrictive, released the draft regulations last September.

If you blacked out all parts of New York where fracking would be banned by the DEC, then black out areas with local bans, there may not be much land left for drilling. If these regulations come into effect, they will significantly limit the areas where fracking can be done in New York and place significant burdens on wells that can be drilled.

The DEC is sifting through 75,000 public comments received through December. The agency then could take time to modify regulations before sending them off to the notoriously slow moving New York legislature. Thus, the moratorium could remain in place for some time.

Litigation

Investors need to be aware of private party litigation concerning fracking where surface landowners sue drillers operating on or near their property. As drilling occurs in populated areas, we're seeing more of these suits. The 60-year delay by environmentalists in asserting complaints may be explained by the lack of intense oil and gas drilling in populated areas—until now.

Most suits are about oil and gas drilling generally, but plaintiffs' lawyers use fracking as a bogeyman to scare judges and juries. Plaintiffs' lawyers often include general claims about fracking, but the heart of the complaints tends to be that oil and gas drilling has caused air pollution, although there are some cases that allege fracking causes groundwater contamination as well. Despite the increased number of these suits, I'm unaware of any suit that has actually been successful in tying contamination to fracking.

The events leading to suit typically begin years before, when the mineral rights are severed from the surface rights. When a company finally decides to exercise the mineral rights and drill a well, often the surface owner has no idea that someone else owns or will exercise the mineral rights on his surface estate. When the company drills a well, the surface owner gets upset when the view out of his kitchen turns industrial. That scene, by the way, only turns to something much less intrusive within three or four weeks.

There are four general claims that we see in litigation. The first is a claim that oil and gas drilling contaminated either the air or groundwater. Often these claims are brought as negligence, trespass or nuisance causes of action.

The second category of claim is nuisance claims, alleging that the drilling is causing unpleasant noise, odors, or light, interfering with the use and enjoyment of the property. Plaintiffs are also bringing breach of contract actions, where they claim that some aspect of the oil and gas drilling breaches either a surface

The town claims that drilling has polluted the air, caused nuisance odors, and created excessive light and noise.

None of these suits has been successful in tying contamination to fracking. In most states, the mineral estate is dominant to the surface estate, meaning that the owner or lessor of the mineral estate is able to make reasonable use of the surface to exploit the oil or gas beneath it. As a result, even if the surface owner had no actual knowledge of the oil and gas company's rights to use the surface of the land when he bought the property, as long as what the oil and gas company is doing is "reasonably necessary to develop the minerals," and the oil company accommodates pre-existing surface uses, there's not really much the surface owner can do to limit oil and gas activity.

Despite this fact, I believe plaintiffs' attorneys and surface owners are likely going to continue to bring these suits. While I can't say they pose a real threat to oil and gas activity, these suits can be a pest for companies, especially if the company is drilling in urban areas and does not have a good "bedside manner" in dealing with landowners.

There is just too much at stake to completely shut down fracking by regulation or litigation. Certain states, especially in the Northeast, will continue to fight against fracking, but on the whole, we will see continued growth in fracking and domestic oil and gas production from shale plays using fracking.

About the author



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