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Gas drilling yields a gusher of hogwash

Both sides of shale debate could be more forthright.

By Terry Engelder

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The exploitation of natural resources often spawns two camps, the industrialists and the environmentalists, each of which engages in disingenuous arguments - the bigger the resource, the more disingenuous the arguments. The debate over extracting natural gas from the Marcellus Shale has followed that pattern.

A pocket of gas may have exploded within 1,300 feet of a Cabot Oil and Gas Corp. well near Dimock, Pa., on Jan. 1, 2009. In a recent Associated Press story about a state shutdown of Cabot's drilling near Dimock, a company spokesman said, "It just isn't scientifically fair to say in any short period of time that Cabot's activities did or did not cause the methane in the groundwater."

This statement doesn't reflect well on Cabot for a couple of reasons. While it is true that methane naturally seeps into groundwater throughout much of the state, potentially leading to such accidents, drilling activity is known to accelerate the process.

Many private wells in the state have dissolved methane in their water, and people drink this water all the time with no ill effects. But if the volume of methane in the water is near saturation, it can collect in pockets of gas when underground pressure is released by water pumps that aren't properly vented.

In the course of our research, my colleagues and students at Penn State have drilled into pockets of methane gas at depths of 500 to 2,000 feet. When such a pocket is penetrated, gas rushes up to the surface, blowing foaming, white water out of the well - much as carbon dioxide drives soda out of a shaken bottle. Fourteen families in the Dimock area have described milky-looking water in their wells.

Penn State's research on the Marcellus Shale is supported by nearly a dozen leaders in the shale gas industry. More than one of these companies have engaged us in trying to solve problems associated with drilling through and isolating shallow gas pockets. Cabot's denials of culpability seem disingenuous given that other industry leaders have recognized the issue and are working with Penn State to address it.

The state Department of Environmental Protection is also working with the industry to make sure groundwater is protected, and the Cabot shutdown is clear evidence of this. Yet, in a long letter to the Centre Daily Times in State College, an environmentalist recently wrote that gas drillers

and DEP regulators "can and do destroy communities and ecosystems, even when the people in those places don't want to be destroyed and say so." This is an equally disingenuous statement from the other side of the debate.

Whether groundwater is contaminated by chemicals employed in deep hydraulic fracturing - the process used to retrieve shale gas - is a controversial question. The industry claims there have been one to two million uses of the technology without a single report of such contamination. The physics of groundwater flow give some credence to that contention. (Surface spills are a different issue, but they are relatively easy to manage.)

One environmentalist recently pointed to alleged cases of contamination in Pennsylvania. But one was a clear case of methane migration from shallow pockets, not from hydraulic fracturing. Another involved the presence of arsenic at 2,600 times the federal standard for drinking water, but arsenic isn't used in fracturing.

As disingenuously, one New York academic recently wrote that exploiting Marcellus Shale gas is comparable to burning coal in terms of greenhouse-gas emissions. This is simply not the case.

The Marcellus Shale is too important to America's energy future to be the subject of disingenuous arguments from either side. It is a gift to the people of Pennsylvania and the greatest opportunity they will ever have to move away from foreign oil and toward a fuel with a smaller global-warming footprint. It is an opportunity that requires clear thinking on both sides of the debate.

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