Obama Names a Fractious Panel to Study Fracking

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My grandfather sold oil-field equipment for a living, and my mother was born in Big Spring in the midst of the West Texas oil boom of 1929. My wife's grandfather spent some time as a roustabout in the oil fields. So to that extent, our roots extend deep into the Texas oil and gas tradition, and lately my wife's father has benefited, however indirectly, from the drilling going on in North Texas to tap the vast natural-gas reserve in the Barnett Shale, a hydrocarbon-rich rock deposit underlying Fort Worth and surrounding areas.

He still owns a home in Fort Worth, and a few years ago we were somewhat surprised to see a drilling rig spring up in a vacant lot only a few miles from his house. Later we were not so surprised when he got offers to lease the mineral rights under his ordinary 50s-era tract home, which he did. All this is to make it clear that when it comes to any controversy over the drilling technique called "fracking," I am hardly an unbiased party.

The problem with the Barnett Shale, as with many other gas and oil deposits around the world that remain after the easy ones to extract have been depleted, is that the good stuff is trapped inside rock that is not porous enough to let it flow out. Over the years, production firms have devised a number of techniques that have brought the cost of extraction down to within reach of today's higher natural-gas prices so that they can make money drilling in formations such as the Barnett Shale, even at the price of paying hundreds of homeowners for rights in a metropolitan area.

One such technique is directional drilling, which replaces the old-time forest of tens or hundreds of independent drilling rigs with one sophisticated rig which drills a number of holes, first vertically down to the depth of the deposit, then horizontally through it to increase the area of contact with the hydrocarbon-bearing formation. But the controversial technique comes next: the high-pressure injection of a

solution of chemicals and particles in water that cracks open spaces in the rock, and props them open so that the gas or oil can flow more freely.

There is nothing particularly new about the fracking process, which has been used for years but not so often in populated areas until recently. But when you shove a lot of chemical-bearing water down a hole, it's all got to go somewhere. Obviously, the producers try to extract as much of it as possible and clean it up before disposing of it when the wells start to produce, but in the nature of things you will never recover all of what you put in.

And although the gas-bearing strata are typically far below the water table where most water wells end, sometimes there are leaks and unexpected ways for the fracking fluid to show up in nearby wells, or even on the surface of the ground. The production firms have been less than forthcoming about what exactly is in their mixtures of fracking fluid, since they feel it might give an edge to their competitors to reveal the exact formula. But even this reluctance is starting to be overcome by government inquiries and other pressures from citizens' groups concerned about the long-term health issues that might arise from having this stuff in the ground in one's neighborhood.

So far, so objective. Now it is time for my editorializing. According to a recent New York Times report, President Obama has named a special seven-member panel to look into the safety and environmental issues surrounding hydraulic fracturing. The President's Energy Secretary, Steven Chu, is quoted as saying, "America's vast natural gas resources can generate many new jobs and provide significant environmental benefits, but we need to ensure we harness these resources safely."

Let's look at the members of the panel from a political point of view. It is headed by John Deutch, an MIT chemistry professor and director of a gas-pipeline operating company. It might be safe to count him in the ranks of promoters of increased gas exploration. Another person on the panel who one might believe is in favor of actually getting more natural gas to the public is Stephen Holditch, who chairs the department of petroleum engineering at Texas A&M. After him, hang onto your hats.

The other five members are: (1) the president of the Environmental Defense Fund; (2) a former aide to Al Gore past member of the Pennsylvania Department of Environmental Protection; (3) an ex-Secretary of Environmental Affairs for the Commonwealth of Massachusetts; (4) energy consultant Daniel Yergin, who wrote a book called "The Prize: The Epic Quest for Oil, Money and Power"; and (5) Mark Zoback, who is a professor of geophysics at Stanford University.

Well, this is one of those times when I started out wanting to bust out of the barn with guns blazing, so to speak, but now I'm having second thoughts. Zoback, for example, seems to be a model of the scientist-engineer with a conscience. Besides writing a textbook on reservoir geomechanics which is probably one that the production companies use in training their own engineers, he teaches a course on "Sustainability and Collapse," whatever that might mean.

Still, I see the potential for deadlock in this panel. It looks like only three members are solidly from the oil-production community, and the remaining four are more critical. That's why there are seven members and not six, so the fourth can break a tie the way the President wants it broken. And just putting an Aggie petroleum engineer in the same room with a former aide to Al Gore seems tantamount to throwing a match into a gas tank just to see what will happen.

Congressional Republicans make the sound point that the Environmental Protection Agency already has full authority to regulate fracking, and does. The big change that has happened recently in the business is not the technology, but the fact that the technology is now operating in areas where large numbers of urbanites see it and wonder what it may be doing to their water supply.

Combined with last summer's Deepwater Horizon accident, these political factors have motivated the Obama administration to try and have it both ways: to appear to be promoting domestic natural-gas exploration and production while in fact encouraging an inquiry and rulemaking effort that can only slow it down, if it does anything at all. What are the chances that the blue-ribbon panel will look at the situation and say, "By gum, you know, there's actually *too many* regulations about environmental aspects of fracking. Let's get rid of some of them so we can get more gas faster!"? Not large, you say? You'd be right.

Perhaps the best we can hope for from this panel is a well-footnoted but divided report, with a minority favoring less regulation, the majority favoring more, and the energy companies just trying to do their job responsibly in response. To the extent the panel's actions hinder gas and oil production without making a real difference in the environment, it will have been a waste of time. To the extent they prevent a future Deepwater-Horizon type of accident in, say Edgecliff Village south of Fort Worth, well, then, maybe it was all worthwhile.

Sources: The New York Times report on the formation of the hydraulic-fracturing panel appeared on May 6, 2011 in the online edition at http://www.nytimes.com/2011/05/07/science/earth/07frack.html?_r=1&hpw [1]

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