

Fracking Has Added Another Problem

David Lee Smith, The Motley Fool, 3-7-11

In addition to significantly increasing the amount of natural gas in our nation's coffers, the combination of directional drilling and hydraulic fracturing (fracking) continues to generate increasing controversy. Most Fools with a bent for energy are familiar with the charges of water table damage from chemicals used in the fracking process.

That issue won't disappear quickly -- and now it's being joined by another fear among the anti-fracturing contingent: the possibility that the drilling process leads to earthquakes. On Friday, that suspicion left Chesapeake Energy and its support company, True Energy Services, prohibited from injecting wastewater into a pair of deep injection wells in Arkansas' Fayetteville shale.

You read that correctly: earthquakes. Once the water -- millions of gallons per well -- has performed its function in the fracking process and become wastewater, it's typically pumped into deep wells called injection wells. Both companies deny that their disposing of wastewater is connected to a precipitous jump in earthquakes in north-central Arkansas of late. The state's Oil and Gas Commission isn't convinced, however, and its director has promised to weigh in with a fresh analysis later this month.

In the meantime, the Fayetteville standard-bearers will be able to continue working by relying on other existing injection wells. Chesapeake is a short-timer in the formation, having agreed to sell its Fayetteville assets to Australia's mining giant BHP Billiton for \$4.75 billion. Beyond that, much of the work being done in the play involves the likes of Southwestern Energy, ExxonMobil, Petrohawk, and PetroQuest.

Clearly, the number of quakes in Arkansas has surged dramatically, perhaps in keeping with an expansion in the companies' operating activity. For instance, while the entire state recorded 38 earthquakes in 2009, there were closer to 850 mostly minor events last year, 150 in December alone. Last month concluded with a 4.7-magnitude shaker, the biggest since before many Fools drew their first breath.

But the Fayetteville isn't a total anomaly in the world of quakes that are apparently drilling related. Less than two years ago, Cleburne, Texas -- south of the Dallas-Fort Worth metroplex and amid the Barnett shale -- experienced its first earthquake in nearly a century and a half. Quakes -- likely stemming from activities similar to fracking -- also have occurred in diverse locations such as Denver and Basel, Switzerland.

The shale gas producers and their service company contractors -- Halliburton, for instance -- must solve these environmental and seismological issues. The promising future of unconventional gas dictates that they do so posthaste.