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Sent: Monday, November 09, 2009 11:14 AM
To: Northeast & Mid-Atlantic LCFS; cobbsd@acblogs-lm119.websys.aol.com
Subject: Peter Horrigan asked us to send you this post from Daily Finance
Categories: Comments

From: [Daily Finance](#)

URL: <http://www.dailyfinance.com/2009/11/08/the-coming-natural-gas-boom-is-not-all-its-fraced-up-to-be/>

Sent from: [Peter Horrigan](#) (petegwyn@aol.com)

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Comments: Be careful what you base the future on! Pete Horrigan MAPDA

[Why the coming natural gas boom isn't all it's 'fraced' up to be](#)

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Please pardon my poor punning, and let me explain: "Fracking" (rhymes with "cracking") is the oil and natural gas industry's an informal contraction for the technology called [hydraulic fracturing](#), in which water (and in some cases, a chemical mixture) is pumped deep underground to fracture shale and rock and thus free up trapped oil and gas deposits.

The financial media has been buzzing with stories proclaiming a [new era for America's natural gas industry](#) as new fracking technology has enabled the tapping of vast dispersed fields in the Eastern U.S. and the "oil patch" states of Oklahoma and Texas. These advances have caused analysts to raise their estimates of America's natural gas reserves to an astounding 1.8 trillion cubic feet, the equivalent of about 320 billion barrels of oil -- far more than Saudi Arabia's proven reserves of around 260 billion barrels of oil.

So is the U.S. about to reclaim its position as a long-term natural gas power? Undoubtedly, fracking technology greatly expands the amount of gas which can now be extracted. But we should be careful not to confuse the ability to access these previously unreachable reserves with low-cost and relatively straightforward reserves that are now being depleted, for fracking is neither cheap nor easy.



Further, we should be careful to note that the U.S. oil and gas industry is the oldest and most mature on the planet, and so our "easy" oil and gas have long since been extracted. So as new reserves come online, they may only be offsetting dec! lines in old fields rather than adding to the net supply.

What Happens Underground Doesn't Stay Underground

There are limitations to the new fracking technologies which are [ignored in the inflated promises](#) offered

by the typical media story.

The superficial accounts give the impression that the water and fracturing-fluids pumped underground somehow magically stay there, when the reality is that some of the contaminated or even toxic liquids return to the surface, where they have to be treated as industrial waste.

The exact mix of fracturing chemicals each company uses is protected as an industrial secret, but those in the know have revealed that many of compounds used are toxic. Some, such as benzene, formaldehyde, ethylene dioxide and nickel sulfate, are confirmed carcinogens.

These fluids can be handled safely, but that process is costly. Indeed, there is a peculiar financial dynamic to these newly accessible fields: They only make financial sense if prices for natural gas are high, yet the very promise of these new deposits acts to depress natural gas prices.

Though prices of natural gas have recently climbed off a multiyear low, the market is glutted with supply. The net result is that while natural gas from these newly exploited fields may be abundant, it won't be cheap because below a certain point, it makes no sense to tap these expensive-to-reach reserves.

Though industry sources tend to pooh-pooh the contamination of ground water as a low-probability event, there are videos on YouTube of people demonstrating some form of contamination by lighting their tap water on fire.

While gas deposits are generally far below ground-water tables, not all the fluids pumped down stay down. And fracking requires large quantities of water -- large enough that some locales are against the practice because it competes with local needs and water rights.

Production Estimates May Be Too Optimistic

Another cost factor is mineral rights. In an old-fashioned oil/gas field, the producer owned the mineral rights, sank a well, and pressurized oil and gas flowed out. But tapping reservoirs of gas which lie under urban or populated areas is not quite so straightforward. Mineral rights must be acquired, and that raises the cost of production.

Petroleum engineers have publicly stated that many fracced wells quickly suffer significant drop-offs in production. In other words, the fracturing works well at first but soon loses its productivity. As a result, some industry professionals are asking if the grandiose estimates for natural gas trapped in shale deposits might be overly optimistic. At least a few are openly pessimistic about the claims being made about future production targets, and other are noting the high decline rate in established conventional wells may offset the new capacity. At least one public source states that [only 28% of the frac-technology wells are profitable](#).

If true, this would constitute a significant cost cap on the entire production technology and call into question the high-flying estimates of future production -- at least at today's prices for natural gas.

Another challenge is the dispersed nature of the fields. Collecting the gas from dozens of distant wellheads is non-trivial; the collection and transport pipe systems required are expensive.

Add it all up and what can we conclude? It's fundamentally reassuring to know that natural gas is abundant in the U.S. and Canada, but sobering to find that the extraction, collection, transport and clean-up will cost a lot more than we're paying for cheaply extracted natural gas.

Charles Hugh Smith writes the [Of Two Minds blog](#) and is the author of numerous books, most recently Survival+!: [Structuring Prosperity for Yourself and the Nation](#).