

Shale Gas Shenanigans

by Dave Cohen

In the years leading up to the crash of the Housing Bubble in 2006 and the subsequent financial meltdown in 2008, there was no shortage of people telling us America's continued prosperity was not in jeopardy. All that talk was nonsense, of course. In 2010, the situation is eerily similar in the natural gas business. We are told that we have 100 years of supply, implying that we will still be producing cheap shale gas long after the oceans are devoid of fish. As in the pre-Housing Bubble days, a few skeptics are crying foul. There are underground rumblings that things are not on the up & up with shale gas.

The first bone of contention is what the actual production costs are. The *Financial Times'* John Dizard has been [questioning the accepted wisdom](#) lately—

A couple of weeks ago, I quoted Ben Dell, an analyst with Bernstein Research in New York, as estimating the shale gas industry really needs a price of \$7.50 to \$8 [per mcf] to break even on its all-in costs of finding and producing the stuff, which would be a 60 per cent price rise [over about \$5 per mcf]. Not easy for many people, or industries, to pay these days...

So I worked people in the energy service industry, and gas producers to try and refute Ben Dell's numbers. I couldn't. My industry sources' numbers all converged close to \$8 per mcf. They do not believe the producers are covering their all-in costs.

For example, as a Texan gas man described the now-hot Marcellus gas fields in Pennsylvania: “One company was saying they can develop reserves there for a little over \$1.15 per mcf. If you ask them, they say it costs them \$3m to drill and complete wells that average 3bn cu ft of reserves, produced over 40 years. Those reserves are calculated on the basis of high initial production [IP] rates that decline rapidly. There is insufficient data to have an accurate estimate for the assumed life of the wells [for the EUR]. You can't check any of this, because unlike elsewhere in the US, the state doesn't release official monthly production numbers for three years”.

“There is a ton of sleight of hand going on here,” he alleges. “The 'costs' don't include the cost of the land, the seismic survey, the operating costs, and other expenses.” Remember, though, that no one with a competent securities lawyer ever needs to tell a lie.

[My note: mcf stands for thousand cubic feet, the standard industry unit of production.]

There are two different magic tricks going on here. First, some costs, like those for the land, are simply left out of the accounting equation. Moreover, shale gas operators like Chesapeake [quote very high IP rates on their best wells](#) and estimate a very large ultimately recoverable (EUR) from these wells, despite the fact that decline rates

on shale gas wells are [typically very steep](#) after the first few months of production. The larger your assumed recoverable per well is, the more profitable your well appears to be. Dizard refers to all this as a sleight of hand, and that's exactly what it appears to be.

Operator production cost estimates look like a form of fraud, but it's the financial and reserves accounting part of things where the stench gets really bad. Here I turn to Allen Brooks' [Gas shales: Energy market solution or problem?](#)

Energy investors have embraced the gas shale phenomenon. In fact, if producers don't have gas shale acreage to highlight in investor presentations — suggesting reserve and production growth — they are ignored in the marketplace. By overstating producing gas shale reserves, companies are able to show extremely favorable finding and development (F&D) economics. Low F&D costs are critical for producers to tap Wall Street for the funds necessary to sustain their aggressive gas shale drilling efforts.

The cost of leases and their relatively short lives have placed a premium on accelerated exploitation. As a result, the industry has been outrunning its ability and desire to complete wells given low natural gas prices. Producers with significant gas volumes previously could hedge at higher prices. This price disparity augmented cash flows. Additionally, large gas shale producers tapped Wall Street for additional capital, entered into joint ventures with larger companies lacking a presence in these plays, and sold assets. But the surge in gas shale production, coupled with the recession and a lackluster demand for natural gas, has pressured gas prices. Producers are now struggling to show both production growth and profitability.

Producers *can not* demonstrate production growth and profitability in the current low price environment. At the same time, by *overstating reserves* (EURs) in their shale gas acreage, they can "tap Wall Street" to keep the party going. But wait, it gets worse. Kurt Cobb [interviewed B. J. Doyle](#), vice president of operations for a small Houston-based oil and natural gas exploration company. Here's the clincher—

[Shale gas operators] will drill prospects that they believe have no reasonable chance of doing anything other than breaking even.

Why will they do this? To boost stated reserves, a number by which Wall Street judges the value of oil and gas companies. They won't, however, make any true profit on these wells. But they will become what Wall Street calls an "asset play." They will be valued on their assets, in this case stated reserves, rather than on their profitability.

These shale gas producers are an *asset play*. And this outcome obviously benefits the Wall Street banks who lend them money. Indeed, this is their *exit strategy* from the unprofitable drilling treadmill they are currently on. If shale gas production can be said to be *in a bubble*, this is where that bubble lies. And the strategy is working! Rigzone [reports on the acquisition frenzy](#)—

BP PLC is expected to announce Tuesday an expansion of its U.S. shale-gas operations through a joint-venture deal in Texas with privately held Lewis Energy Group worth at least \$160 million...

BP's move is the latest in a string of deals that have brought major oil companies into U.S. shale gas--a substantial resource that has boosted U.S. gas reserves significantly and is transforming the energy industry... BP, Norway's Statoil SA (STO) and other big oil companies also aim to apply expertise gained in North America to their efforts overseas to extract gas from deep, hard, shale-rock formations.

Several companies have been jostling for acquisitions in the sector, which was pioneered by smaller, independent U.S. producers such as Chesapeake Energy Corp. (CHK) and XTO Energy Inc. (XTO). France's Total SA (TOT) agreed in January to acquire a quarter of Chesapeake's Barnett Shale operations in Texas for \$2.25 billion. This came the month after Exxon Mobil Corp. (XOM) gave shale-gas development a definitive stamp of approval by agreeing to acquire XTO in an all-share deal valued at around \$31 billion.

What is the upshot of these Shale Gas Shenanigans? As the major oil & gas companies get more involved, *the shale gas boom will likely go bust in 2010 and thereafter until prices rise above costs to make production profitable.* As Brooks put it, Exxon Mobil "has the financial strength to withstand a low gas price environment and marginal returns from gas shale activity until technology helps to lower development costs." Dizard was simply sarcastic:

The majors, which can't seem to explore their way out of a grocery bag these days, at least in the onshore US, needed those elastic "reserves" to replace politically risky hydrocarbons in geologically better locations. They, and the remaining independent producers, will be bailed out by gas at \$10 an mcf – double today's level – or higher. Then the service industry will be able to raise prices to cover its full costs.

Don't tell the political people. Not that they'd listen.

The shale gas boom has been the sole bright spot in America's energy picture, and maybe the only bright spot in the economy as a whole. And what does that bright spot turn out to be? *An asset play whereby shale gas producers, conniving with bankers, inflate their own value, hoping to get out while the getting is good.*

What else would you expect in 21st century America?