

# The Truth About Fracking's Impact

SEASON 2  
episode fourteen

---

Nick Lemann

From Columbia Global Reports. We're back with Bethany McLean, author of two of our past books, *Shaky Ground: The Strange Saga of the U.S. Mortgage Giants*, and *Saudi America: The Truth About Fracking and How It's Changing the World*.

In part one of our conversation with Bethany, who talked about her first book for us, *Shaky Ground*, and the mortgage industry. If you haven't heard that episode yet, you'll want to go back into our feed and listen to part one now.

We had such a good experience publishing her work the first time around, we were thrilled when she approached us with the idea to research the true story of fracking's impact on Wall Street, the economy, and geopolitics. The book that resulted from that was *Saudi America*, which the *Financial Times* calls "a clear and concise portrait of the US shale revolution."

A lot of people listening to this and, you know, casually reading the papers – and this is one reason why this book is so important – they have a very limited understanding of what fracking is and how they should think about it. Unless they live in like Texas or Oklahoma. If they live in New York, where I'm from, they tend to think fracking equals environmental hazards. Right. And that's kind of the total sum of what they know about fracking.

So let's start by just giving us a kind of bigger picture. In the book, you essentially set aside environmental questions about fracking and say there's a lot of good writing about this, but I'm here to talk about other stuff. So tell us about the other stuff. Why is fracking important in ways, you know, in economic and geopolitical ways?

Bethany McLean

Right. So the thing that intrigued me the most about fracking is that it is, it has arguably changed the world. And what I mean by that is that back in 2006, 2007, the basic conventional wisdom was the US was facing huge shortages of natural gas and we were destined to always have to rely on other countries to meet all of our, to meet an increasing portion of our oil needs. That we were done as an oil producer and particularly as a natural gas producer.

And thanks to fracking, all of that changed dramatically. There's now a pretty good understanding that the US sits on top of a huge and cheap store of natural gas. And fracking technology, once turned toward extracting oil, turned out to release this prolific supply of oil. Such that for a point earlier this year, early in 2019, the US was briefly the largest producer of oil in the world. Bigger than Saudi Arabia and Russia again.

So that dramatic nature of the change over the past decade cannot be overstated. And there is this idea, although it's always been more of a theoretical than a practical reality, that fracking is also going to change geopolitics.

Because what does it do that the US can now produce cheap – and export – produce cheap natural gas? What does it do that the US can now export oil? Part of the journey or the narrative of fracking was in 2015 when President Obama overturned the long-lasting US ban on oil exports, which had existed since the dark days of the 1970s, when we all started to worry that we were going to be short on oil forever.

So you just, you can't overstate how much the world has changed as a result of fracking. But the thing that made me really interested in it was that it's not economically viable. The industry doesn't make any money. It doesn't produce that most basic of things, which is free cash flow. And those of you who aren't financial, think of free cash flow as like what your ability to spend money after you have, to spend cash, after you've paid all your bills, without being able to take out additional credit is like. That's your free cash flow.

And for a business not to have free cash flow, but to remain viable means it needs to keep raising money from markets. It needs to have investors willing to put more and more money into it. And I thought how odd, you can have this industry that – it's not a fraud. There's oil and gas coming out of the ground. But it doesn't make sense economically. And what is going on here.

And while the environmental issues with fracking were well known and well covered, the financial issues had been pretty much ignored. Such that when I said that to most people, they were just in shock. I mean, I remember when I brought the idea to you, I think it was, what, it must have been early 2017. Right? And I said, "Well, I'm obsessed with this company called Chesapeake Energy and this guy, Aubrey McClendon, because it seems to me indicative of this broader story of fracking. Which is these incredible, charismatic characters, and the birth of this whole new industry, and this complete inability to make money.

Nick Lemann

So let's go back and, just with a couple of basic things, just for, you know, my fellow New Yorkers. What is natural gas and how is it different from oil?

Bethany McLean

Well, natural gas is a gas, and oil is not a gas. That's one fundamental difference. Natural gas has been used mainly in heating and in power plants, whereas oil has been used mainly for transportation.

So you can think of them as very, very different in the ways their energy has been practically applied. The process of fracking for natural gas is very different than oil. Well, it's a similar process, but because natural gas is gas it's much easier to get out of the ground than oil is.

So the economics for producing natural gas from fracking are actually much closer to making sense than the economics for producing oil. Some of the big proponents of natural gas have argued that if we could switch our economy from being oil dependent to being more natural gas dependent by creating transportation, whether passenger cars or other forms of transport that rely on natural gas to power them instead of oil, that we would not only be better off geopolitically, because we would have to import less oil, but that we would also be better off environmentally.

That last point, this is contentious, there's an argument about whether natural gas is cleaner or not, than oil. So in environmental circles, one side has it that natural gas is a bridge fuel to a cleaner, renewable future.

For sure, the rise in cheap natural gas has contributed to a big decrease in the use of coal in power plants and as a result, the US's carbon emissions are way down, despite our official refusals to do anything on climate change.

But there's a corresponding issue with natural gas, which is then methane production. And so in response...

Nick Lemann

It's also a great greenhouse gas.

Bethany McLean

Yes. So some environmentalists will say, "No, no, no. This idea that natural gas is a

bridge fuel is a total lie.” So there’s controversy about that. But they are very different substances.

Nick Lemann

And a little bit without, you know, one’s needing an engineering degree, how does fracking work? How does it get oil out of the ground?

Bethany McLean

So my favorite explanation for fracking came from an engineer who said essentially that fracking was akin to having lots of people trapped in a building, all the doors closed, and yelling “fire,” and seeing how people got out.

And that’s probably a terrible analogy in some ways – at least it pains me to think of it – but that the idea was with natural, that’s what you’re doing in the ground. You’re running a drill bit horizontally instead of vertically. You’re packing it full of sand or other substances that help prop open the crevices that might exist. And then you’re pumping all this mixture of this liquid that is water mixed with chemicals down, down into the ground, and you’re forcing it to come up by any means, and it finds its way up through the fissures that you that you’ve held open.

Nick Lemann

You’re telling me about fracking, and even I want to invest in fracking. It sounds great. I think it’s a can’t lose deal. So why can’t you make money on fracking?

Bethany McLean

So the basic reason why you can’t make money is that it costs a lot of money to do this. And thus far you have not been able to sell your oil and natural gas for enough to make up for the incredible costs of doing this.

And some part of that is because, a big chunk of that is because of the decline rates on the wells. And that sounds a little bit technical, but it really isn’t. When you drill a conventional vertical well, the well’s going to keep pumping for a long time. And so you invest a lot in drilling the well, and then you keep getting oil or natural gas out of it.

When you frack a well, you get a lot of oil or natural gas out of it. And then the next year you get about 80% less. And so in order to keep your production flat or growing, you have to continue to put more and more billions of dollars into the ground.

And so it's a treadmill where you just can't get off the treadmill of continued requirement for more and more capital investment. And so that's the fundamental flaw at the heart of fracking that the industry has not been able to figure a way around.

And when I was reporting my book, there was a decent argument that technological innovation was going to change all of that. That technological breakthroughs would both lessen the decline rates, and make it cheaper to get oil out of the ground so that you would be able to make money from this.

But in the two years since we published the book, if anything, it's gone the other way. It turned out that many of the most heralded technological innovations did not work. And so while you can argue there may be a breakthrough at some point in the future, it hasn't come yet.

Nick Lemann

Let's talk a little bit about Aubrey McClendon, who's sort of the main character in your book. Who was he and how does he kind of stand for what you're saying about the natural gas business?

Bethany McLean

So I found Aubrey one of those great characters that you come across in covering business. One of those rare, amazing, fascinating characters. He created from scratch, essentially, a company called Chesapeake Energy.

He began his career as what was known as a landman, which was running around convincing landowners to lease him their property so that he could drill for oil and natural gas on it. And he created out of that this company called Chesapeake Energy that became the vanguard of the fracking revolution in this country.

And Aubrey wasn't that technical genius. He wasn't the guy who figured out how to frack a well. That credit goes to a guy named George Mitchell, most people agree. But Aubrey was the one who convinced institutions around the globe to commit literally tens of billions of dollars to fracking.

So he's the guy who brought the capital to the industry, and that's what made him the perfect person for me to write about, since I was focused on the money aspect of this. I believe, and people said this to me, that without Aubrey, the history of fracking would have been different because you never would have seen all the money pour into it that did. Because he was that kind of showman, that kind of salesman.

I remember a great story when I was sitting with an investor who was pretty skeptical of fracking, and he said, “You know, I never let Aubrey in here for a meeting because if I had, we would have ended up buying Chesapeake stock, and it wouldn’t have ended well.” And it didn’t end well. I think Chesapeake is close to bankruptcy, if they haven’t declared already, and has been struggling for years. But he was that good, that he could, you know, the proverbial could sell ice to Eskimos guy.

Nick Lemann

And what happened to him?

Bethany McLean

So he is also a tragic figure in that he died in a car crash. And there will always be a debate about whether it was an accident or whether it was suicide. And it was the spring of 2017, right after he’d been indicted by the government for price fixing. Literally the day after he’d been indicted. And the government’s indictment would have taken away his business because he’d continued to raise money by using personal guarantees in order to raise money.

And that all would have collapsed in on himself in the wake of a federal indictment. And he drove his Chevy Tahoe at top speed into a bridge. But that’s the way Aubrey – it sounds on the surface, you’d look at it and think, well, the guy killed himself. But that’s the way Aubrey was. And people who saw him in the months leading up to his death didn’t see any huge change in him. He was one of those infectiously enthusiastic people.

And I have to admit, as you can probably tell, I have a degree of sympathy for him. And that’s because, unlike so many figures in our business world, Aubrey put his money where his mouth was. So he must have gone broke, I think he went broke three times. And each time it was because he put his own personal fortune behind his belief and his companies and his belief in fracking.

And so he wasn’t just risking other people’s money, which is what so many people in our business world did. He risked his own, and he didn’t hold anything aside for him, for himself, in any kind of secret, you know, offshore institution. He put everything he had behind what he said. And I have a certain sort of admiration for the person who goes down with the ship versus the person who makes sure they take theirs off the table and then continues to tell investors how much they believe. Right?

Nick Lemann

Now, along with the super optimism about the economic prospects of fracking, when, a sort of political vision as well. So could you talk about that a little? That is, you know, you mentioned a little bit earlier, back in the seventies, the country was kind of obsessed with energy independence, achieving energy independence and becoming an energy exporter. And then partially thanks to fracking, it became that. What was supposed to flow from that?

In other words, back in the seventies, we'd say, "Well, we have to be energy independent because Saudi Arabia has us over a barrel. We can't live without their good will." So what's the sort of flip side scenario to that?

Bethany McLean

Well, there isn't one. So when I started the book, I actually thought that energy independence was a real thing because, of course, it was. It's been repeated since the 1970s. It's been repeated by every president, Democrat or Republican, as this grand goal for America, that we should be energy independent.

And so on the surface, America's ability to produce a lot of oil and natural gas is energy independence. And isn't that what we always wanted? So much so that the Trump administration even started calling it energy dominance, not just energy independence.

But when you poke under the meaning of those two words, you see immediately that the ensuing decades have stripped the meaning out of those words, such that the concept itself is almost fraudulent.

And what I mean by that is that back in the 1970s, a far less global world, the Texas Railroad Commission set the price of a barrel of oil. If America could produce enough oil to satisfy America's needs, there was an argument that we were energy independent.

Today, oil is traded on the global – at Brent. Brent sets the price. It's a global, it's set globally. So the price of a barrel of oil is always going to be determined by events that are entirely outside of America's control. Right? So that's not independence.

Secondly, even if we were to be able to produce enough oil to satisfy our needs, and we're a long way away from that, even at the peak, when you take into account vagaries in different types of oil. But even if we were, our high-tech industries and

others rely heavily on imports from Asia. Asia, in turn, is heavily reliant on oil from the Middle East. So the idea that we as America could walk away from our entanglements in the Middle East because we don't need their oil just is based on a completely flawed understanding of the global economy. And so that's a second factor.

The third factor is that how can any industry that depends on continued capital inflows, any industry that doesn't financially support itself, that is dependent on the availability of capital and the willingness of that capital to be invested in fracking. That's the definition of dependence. That's not independent. So unless fracking is financially viable on its own, it can't possibly be, we can't possibly – energy independence has no meaning. It's empty words.

And then later on top of that, the fact that we are moving toward renewables. Right? The pace of that is a huge question. Whether the pandemic accelerates that pace or slows it down is a giant debate. But there's no question that at some point the world will transition to renewables. So what does it mean for the US to be beating its chest about energy independence as measured by access to fossil fuels, when we all know that's not the way the world is going? Right? It's a little bit like, "Look at me. Wasn't I great?" Forget about where the world is going and whether I'm going to be great in the world as it's going.

So I also felt that it was, by touting that concept, it takes our eye off the ball that matters, which is where the world is going in the future.

Nick Lemann

Since the book came out, especially quite recently, things have been pretty dramatic in the oil world. So can you talk about that a little and tell us what's happening and where you see it going?

Bethany McLean

Right. Well, there are two phases to it. So in the wake of the pandemic, which dramatically decreased the world's demand for oil, thereby crushing the price. On top of that, Saudi Arabia and Russia initially got into a war where both declined to cut production. Which meant that collapsed the price even further.

Nick Lemann

Why were they doing that?



Bethany McLean

Well, I think it's complicated as to why they were doing that. Both economies desperately need revenue. Right. And so being able to sell something for a little bit of money is better than not being able to sell anything at all. I think Saudi Arabia, in particular, is very aware that the end of the oil era is coming.

And so there's an argument that get all, get what you can for your oil while you can get it before renewables completely decrease the world, get rid of the world's demand for oil. Right. So there are a couple of components to that. And then just another is geopolitical standing. Right? Warfare.

Anyway, so that totally crushed the price of oil and caused fracking stocks to go into a tailspin. The backstory was longer. Investors had begun to recognize this phenomenon that I talked about in my book, which is that the industry doesn't make money.

So even for the years leading up to this, publicly traded fracking companies had dramatically underperformed. They'd stopped being able to raise money. They were barely able to raise debt. Because investors had started to say, "Whoa, whoa, whoa. If you guys aren't making money where is – you've been promising this for a decade, where's the money?" So the events of the pandemic really only accelerated this underlying trend. And so there were briefly predictions that we were going to see mammoth bankruptcies across the shale patch. For sure. We are going to see a dramatic decline in drilling.

And so this idea that the US was going to produce an ever-increasing amount of oil due to the advent of fracking has been proven wrong. Because oil production will for sure be down next year. That said, people have said to me, "Well, is shale going away?" And I've said, "I don't know." Because capital is going to remain really cheap, right? Interest rates are going to remain really low.

So whether or not it goes away depends on the availability of money to finance it. Will money continue to be available to finance it or will there be government policy, given the arguable importance of this industry to American interests that continue to support it? Quite possibly, yes.

So I would never – I said this many times in talking about the book, but the one thing the book for sure taught me was a great deal of humility about forecasts, because most people who have made predictions about the future of oil and gas have been dead wrong.

And so I try to stay away from forecasts about where it's going. The industry that emerges will look very different than the one that existed beforehand, but there may be an industry that emerges. I wouldn't call the swansong for fracking just yet.

Nick Lemann

And for us drivers, are our gas prices going to be as pleasingly low as they are now for a long time?

Bethany McLean

That's a good question, right? If, on the one hand, you might argue, yes, that global demand is going to stay really low and that's going to keep prices really low.

On the other hand, if travel and transportation comes back a lot more quickly than people expect and oil supplies don't come online as quickly as people think, you could see a big uptick in prices.

So the short answer is, I don't know. Enjoy it while it lasts.

Nick Lemann

I am. Okay. Well, we have to stop now. But thank you very much for being with us.

Bethany McLean

It was very nice to see you.

Nick Lemann

Again, Bethany McLean's books are *Saudi America: The Truth About Fracking and How It's Changing the World*, and *Shaky Ground: The Strange Saga of the U.S. Mortgage Giants*.

You can find a list of all her titles, as well as a link to her own podcast, *Making a Killing*, on our site at [globalreports.columbia.edu](http://globalreports.columbia.edu). That's [globalreports.columbia.edu](http://globalreports.columbia.edu). I'm Nick Lemann for Columbia Global Reports. Thank you for listening. Take care.