Oil Production Still Increasing — Confounding Experts

A month ago the International Energy Agency (IEA) began hedging its bet that declining oil prices would cut production: "U.S. supply [of crude oil] so far shows precious little sign of slowing down. Quite to the contrary, it continues to defy expectations."

This is how economists say "Oops!"

On Friday the IEA was still astonished at the resilience of the oil industry as it continued to produce at record levels, despite predictions that declining rig counts would force production cuts. Instead, total U.S. crude oil production hit a high of 9.4 million barrels a day during the week ending March 6.

Others are predicting that eventually there will be no place to store the surplus oil. At present, over 70 percent of available crude-oil storage capacity is being used, raising questions about where to put the oil if production doesn't begin declining soon.

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The free market is providing the answers to these and other questions, with the price of crude oil on Friday (for April delivery on the New York Mercantile Exchange) touching the lowest price since January 28. Expectations were that oil, which dropped from over $100 a barrel late last year, would bottom out somewhere around $55 a barrel, and then begin slowly inching its way back up. For about 30 days, that prediction seemed to be accurate.

But with oil now $10 a barrel below that number, economists are looking for answers. Not surprisingly, the oil industry is enjoying the operation of at least two principles or laws, along with a good helping of competition.

Moore's Law was stated back in 1965 by Gordon Moore, the co-founder of Intel: "The number of transistors on an integrated computer chip, thanks to improvements in technology, will double every two years." Not only has that "law" been proven to be accurate in the interim, it forms the foundation of long-term planning for the semiconductor industry!

It turns out that Moore was a little too conservative. David House, another Intel executive, has predicted that the doubling will take place every 18 months.

We are witnessing a similar principle in operation regarding the oil supply. As recently as five years ago, it could take nine months to get oil out of the ground. Today? Less than 30 days. And those wells are vastly more efficient in getting that oil. In the Eagle Ford region of Texas, wells are producing an astonishing 18 times more efficiently than they were in 2008, and today's wells are operating 65 percent more efficiently today than they were in 2013.

And now there's "re-fracking" — a process of going back to old wells and using the improved technology to release much more of the oil left behind. This is vastly more efficient than drilling a new well: All the capital costs have already been incurred. The cost to lift a barrel of oil in an old well is only a fraction of the cost in a new one.

There's the Pareto Principle at work as well — named for Italian economist Vilfredo Pareto, the first to expound on the now well-known 80-20 rule: "80 percent of _____ comes from 20 percent of _____." He noticed, for example, that approximately 80 percent of the land in Italy was owned by 20 percent of the people; and that 80 percent of the peas in his garden came from 20 percent of the pods. Sales organizations know that roughly 80 percent of their sales come from 20 percent of their customers. And 80 percent of those sales are made by around 20 percent of the salesmen.

Much ink has been wasted in decrying the collapse in the number of rigs operating in the oil patch,

falling from a high of 1,609 last October to just 866 last week, the 14th straight weekly decline, cutting the number of operating rigs nearly in half. Using the old math, that would mean that, eventually, oil production would also be cut in half.

Enter the Pareto Principle. Sixteen percent of U.S. oil wells account for 82 percent of the oil produced. Put another way, most of the other wells are marginal producers and can be safely taken offline, temporarily, with little impact on production.

And then there's the free market principle of competition. With fewer wells being drilled, service providers are sharpening their pencils as they compete for their piece of a shrinking pie, thus bringing costs down further.

But what about storage? Isn't that going to be the ultimate cap on production? When every seagoing tanker, rail car, and tanker truck is full to the brim, where will the excess production go?

It will stay in the ground until prices go back up. It's called "underground" storage. At present there are more than 3,000 wells already drilled in North Dakota and Texas, just waiting to be completed. Some drillers are continuing to drill but are putting off completing the wells. As Harold Hamm, the CEO of Continental Resources, told his peers: "Save that money. Avoid selling that production in this poor market and wait for service costs to fall [further] before completing those wells."

Moore's Law (doubling of efficiency every two years or less), the Pareto Principle (the 80-20 rule), and good old-fashioned competition are combining to teach economists at EIA a free market lesson or two. Predictions of a rise in oil prices just in time for summer vacations are now being hedged. While few are predicting oil at $20 a barrel, even fewer are predicting $100 a barrel by the end of the year, as some were just a few months ago.

For many American consumers, this discussion is too esoteric; they're just delighted to be enjoying all the benefits of lower oil and gasoline prices. And they're likely to continue to do so for some time, thanks to the free market and its laws and principles.

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