RAILROAD WEEK IN REVIEW

January 3, 2020

"The positive side is that we have seen the majors come into the shale-drilling fields. We have some adults in the room for the first time in the shale industry. We have Chevron and Exxon Mobil, who have been in the business for 100 years, and they have more capital, and they have more discipline." — Tracy Schuchart, Capital Benoit, on oil field economics, RealVision, Dec 23

"The BNSF acquisition gave us $22 billion of cash to deploy in a business we understood and liked for the long term. It has the additional virtue of being run by Matt Rose, whom we trust and admire. We also like the prospect of investing additional billions over the years at reasonable rates of return." – Warren Buffett, 2009 Berkshire Hathaway Letter to shareholders, page 17

"Over time, the movement of goods in the United States will increase, and BNSF should get its full share of the gain. The railroad will need to invest massively to bring out this growth, but no one is better situated than Berkshire to supply the funds required. However slow the economy, or chaotic the markets, our checks will cash." — Warren Buffett, 2010 Berkshire Hathaway letter to shareholders, page 1 page 3

How Easy Money Enabled The Shale Evolution is a December 11 Real Vision conversation with Danielle DiMartino Booth, CEO of Quill Intelligence, and Tracy Shuchart of family office Capital Benoit. They have teamed up on a new report exploring the role of monetary policy in advancing the shale industry.

Real Vision host Ed Harrison keeps the energy level high as former Dallas Fed insider Booth and Shuchart (energy futures trader, perhaps best known as @chigrl on Twitter) examine the stunning correlation between the Fed's balance sheet and U.S. oil production, the explosion of high yield issuance in the sector, and the impending wall of maturity. This conversation goes a long way to explain the sudden drop in shale-drilling in the Permian and elsewhere.

The topics discussed bear on every railroad operator having anything to do with the oil and gas exploration space. The combination of easy money up front and too many players now suggests the bloom may be off the frac sand rose for the railroads. Some excerpts:

> Booth: When you put WTI on a chart against the Fed's balance sheet, they literally track one another up to this day. We wouldn't have had a revolutionary shale revolution had it not been for all of the easy money flowing that started in December 2008 when the Fed lowered interest rates.
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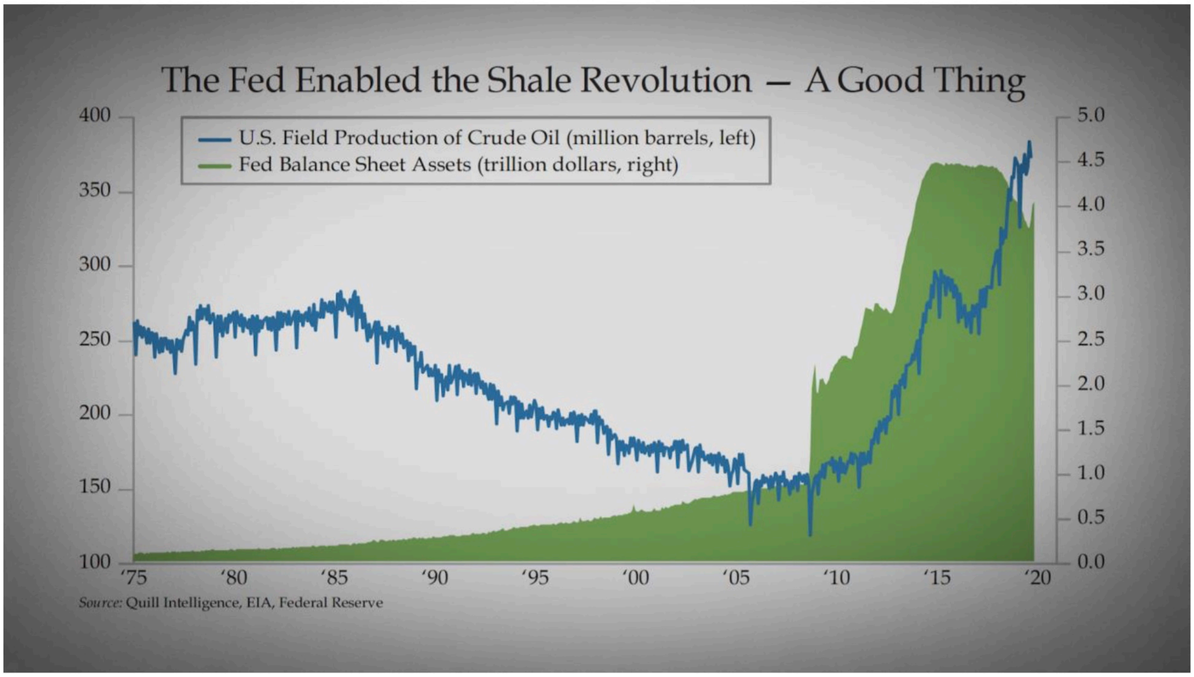
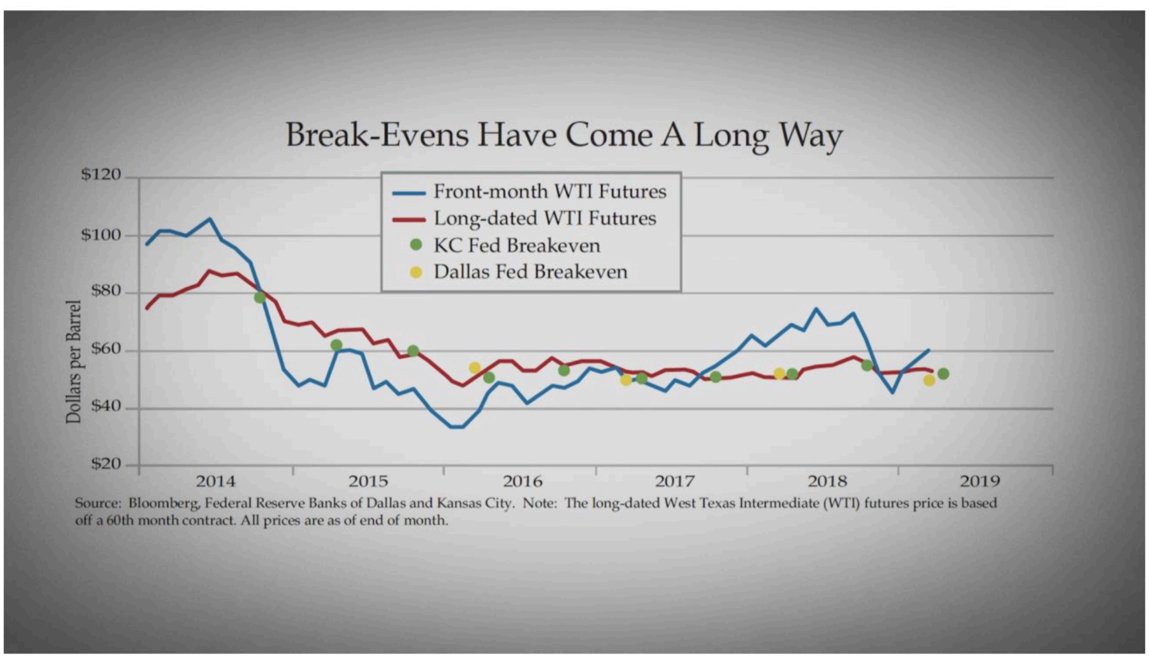
> Schuchart: I don't think easy money is going to solve the problem this time, because I think that banks got burned the first time, then you had all this private equity, and they're still getting burned. We're seeing double things happen here.



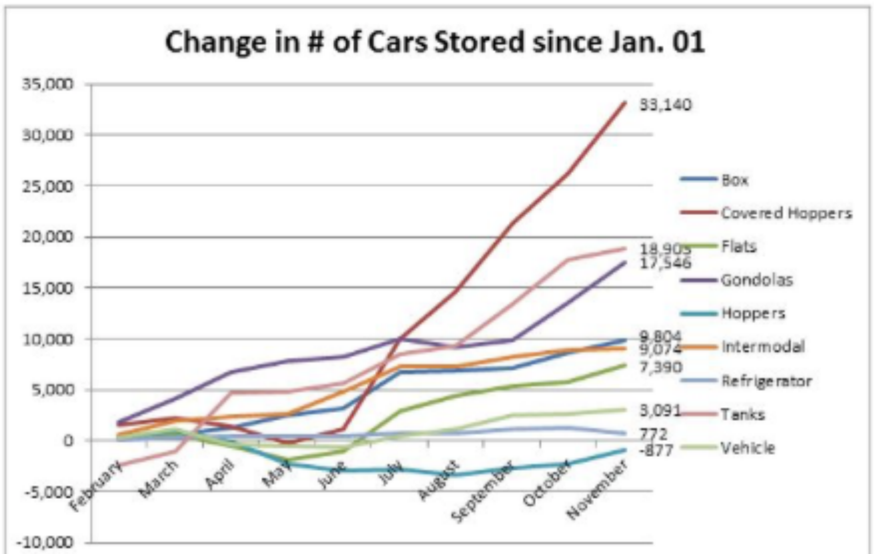
We're seeing people not getting renewed on their debt, not being able to roll over their loans. We also are seeing that there's literally no CapEx right now. We're also seeing rigs decline. The immediate future doesn't look so good. Even if there's easy money out there, nobody wants to throw it at this industry at this point.



In other words, if you're spending more than $40-60 a barbell to get it out of the ground, you're losing money. And it's here where many of the late-comers and and smaller drillers live. Schuchart:

> I would be looking to '21-'22 more to invest in this space, not next year, I'm sure everybody said, look, oil companies' prices couldn't get any lower. Well, they are. Everybody says it's the bottom this time, but I'm just saying it's not the bottom yet.

The charts also explain why the spike in the number of covered hoppers in storage. Here's one graph, courtesy of PFL Petroleum:



The AAR puts frac sand in "non-metallic minerals." That group, 2019 year-to-date through Week 50 (December 14), was down 4.4 percent. Union Pacific, the major Permian presence, had that commodity group down 10.6 percent for the same period. Thus I think it's time for the wise shortline operator with exposure to the Permian to take this downturn in the sand trade as call to seek out and develop other lines of business.

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