



## Art Berman: Crude Oil Special Double Header February 1, 2018

**Erik:** Joining me next on the program is everyone's favorite petroleum geologist, Art Berman.

Art, I've got to hand it to you. The last time we had you on the program, back in October, you talked us through your comparative inventory model and you said, if I look at where we are on the yield curve it says to me that prices are headed higher. And, furthermore, we're at an inflection point where they could head much higher pretty quickly.

And I remember being skeptical at the time. Because you'd had a lot of success with this comparative inventory price model that you have, but I kind of felt like aren't we talking about apples to oranges?

Because in the past exports were not legal. Now that they are legal, we're exporting a lot of oil. There's a lot of inventory drawdowns that are not coming from a change in consumption, they're just coming from exports. I thought, does that really mean that the same model is valid? Or not?

And when we discussed it at the time you said, you're right. It's a different game now. But, at the end of the day, inventory is drawn down. It's drawing down fast. And every time that's ever happened in history before, prices have gone up. And you said you were sticking to your guns. And that's exactly what's happened.

So my hat's off to you there. My question, though, is – here we are a few months later, we've seen this tremendous run-up in prices. Something that I've seen you tweet about quite a bit, as have several other people, is, that we've gotten to a positioning point now where there's a 12:1 ratio of longs to shorts.

And we've got more record net length in petroleum products, be it WTI and Brent and so forth. This is just ripe if prices do start to go down. But everybody's on one side of the boat.

So are you concerned about a significant downside correction at this point because of the positioning? Or do you think that we've got further to go higher in oil prices?

**Art:** Erik, that's an awfully good question. And if I fully knew the answer I'd say so. I'm concerned about that too.

But, as with many things that we've seen in this market since prices collapsed three years ago, the rules are different this time. And when we've seen long positions so outnumber the shorts

in the past couple of years, it always leads to a correction. I think the reason for that is that those were periods of sentiment-based excursion from the yield curve.

And I recognize that as such. Mike Bodell, who developed this approach, recognized it as such. So the correction was back to what the fundamentals suggested.

Don't get me wrong, I'm not one of these total technical geeks who thinks that fundamentals rule the market. They don't. It's a speculative market. But eventually things have to regress to the norm based on fundamentals. And it can go on for a while.

So what the fundamentals tell me, Erik, is that we are increasing in price for completely rational reasons as opposed to the excursions in early 2017 when it was an expectation of OPEC cuts. Or in early 2015 when it was expectation that happy days are here again and the oil price collapse wasn't real.

And so we're looking at a very strong and lengthy trend that's been going on since February – almost a year now. And until I see enough data points that say we're flattening or heading in the other direction, I'm saying this is the trend we're on.

So I think prices will increase. I don't know how much. But we're awfully near the five-year average, and my model tells me we ought to be somewhere between \$70 and \$75 when we reduce comparative inventory another 10 million barrels.

**Erik:** Now, for our newer listeners who may not be familiar with your model, you work on comparative inventory. A lot of people watch the EIA's inventory reports every week.

You correct that to essentially the five-year running average of, basically, adjusting it for seasonality: What has inventory done this particular week of the year over the last five years? And how does this week's inventory report compare to that? So you're looking at it on a seasonally-adjusted basis.

Give us a quick overview of where we stand in comparative inventory. Because it sounds like we're almost back down to the long-term average, in terms of where inventory levels stand.

**Art:** That's exactly right. You've described the methodology perfectly. We were at a point a year ago – mid-February almost a year ago – where we had something like 213 million barrels of excess. And, just for people who are not familiar, this is a basket of crude oil and refined products. It doesn't include all refined products but it includes the big ones like gasoline and distillate that I believe are most influential to pricing.

So we went from something like 213 million barrels. We got down to 8 million last week. We went up what I consider to be a relatively insignificant not quite 2 million this week. And so we're effectively at the five-year average.

Which, I hate to say it maybe, but that's what OPEC, OPEC Plus, were trying to do all along. And, I guess, my hat's off to them. One way or another, they've gotten us there.

Do they deserve all the credit? Maybe not. Certainly, a stronger economy has played a big role in not just US but global consumption, and that's a big piece of it. You could argue lower oil prices for several years running do have that effect. And I believe that was also part of the OPEC strategy – if in fact a strategy ever existed, and I'm not really sure that that's the case either. But, since we're dealing in speculatives, that's my sense.

So the five-year average – we're almost there. The model that I have – an empirical model really – says that the price is about right. And unless that trend of comparative inventory reduction reverses, it's going to keep going up. That's all there is to it. It's that simple.

**Erik:** Art, you sent us a fantastic deck of slides and charts that I'd like to go ahead and get into. Registered users will find the download link in your Research Roundup email. If you're not yet registered, just look for the [instructions for getting the download](#) next to Art's picture on our home page at macrovoices.com.

Going to Slide 2 in the slide deck, it looks like you're basically showing us both the price history as well as what's going on with the forward curves. Walk us through this slide. What's going on here?

**Art:** If we look at the slide, I've got two light blue lines there and it goes through the history of OPEC getting proactive beginning back in late August–September of 2016 when they first floated the idea of a production cut (as opposed to a freeze, which they had talked about for much of that year).

And, of course, then they actually did institute the cut in November of '16. They extended the cut in June of '17.

If you put a line through all those, that's \$43 a barrel more or less, WTI. And you look at where we are right now, or where we were a day or two ago when I made this chart, we were at about \$66. That's \$23. So do I want to attribute all of that \$23 or so per barrel rise to OPEC? Yeah, I kind of do. It's got to do with taking an awful lot of oil off the market. And there's a slide that we can discuss that in more detail later on.

But remember what the intent was of these cuts. The intent was to get inventory back to the five-year average. And the way you do that is to force the forward curve from contango, where the future price is greater than the spot price, into backwardation, where the spot price is greater than the future price, so that there is incentive to move oil out of storage.

And the graph on the right shows kind of a monthly progression from September through January. And we see September was clearly a contango term structure. October was – I'm not sure what it was. Maybe very, very slightly backwardation. By the time we got to November,

December, January, unquestionable backwardation.

So the forward curve – it's a speculative market and that's what tells producers, or tells people that are paying for storage space, that it's dumb to keep your oil at your carrying costs. Get it out of there. And if there's a market, then all the better.

So that's what those two slides are about. OPEC had accomplished what they hoped to accomplish. And they effectively did it through this change in term structure of the forward curves.

**Erik:** Now, some people have speculated that OPEC has been intentionally trying to manipulate and shape the forward curve with the goal of making it more difficult for US shale producers to hedge their forward production. Because, of course, although they're making their deals with an investment bank, somebody has to in turn go and sell futures a couple of years out on the curve. And of course if the prices are depressed two years out on the curve, it's that much harder for the US shale guys to hedge their production.

Do you think that that's part of the motivation here? Or do you think this is just a natural reflection of the market expecting tightening supply, which is what normally leads to backwardation in the term structure?

**Art:** It's a complicated question to answer because, obviously, I don't know what OPEC's strategy is. Nobody knows what OPEC's strategy is. And there may be some truth to it, Erik.

But I've contended all along that the narrative about a price war between Saudi Arabia and some of their OPEC members versus US shale is largely – it's an American invention. It's a hubris-based model that says we're so great that they're waging war on us.

I think the truth is, probably, they chose not to control prices back in late 2014 because they didn't want to repeat the mistake they felt they'd made back in 1982 – which was to take a tremendous amount of oil off the market and lose a huge amount of revenue – and not influence prices at all. I think that the OPEC oil minister at the time said, "I'm never making that mistake again." Of course, he wasn't actually the minister who made the mistake.

So, yeah, there may be an element of that. But I think it's much more of a profit motive on their part. That if we can turn this thing around by withholding a relatively small amount of production for a relatively short amount of time, we're money ahead.

The other point of argument, I suppose, is Rystad Energy just published a chart yesterday, or this week anyway, showing the hedged positions of all the major US shale players. Of course they go from completely unhedged – some of the majors Anadarko (not a major but a big company) – to Pioneer – I don't remember the percentage but it's at least 75% hedged.

Whether or not that's really part of their strategy, I don't know. If so, good for them for

recognizing it. But I think the fundamental point you made, that they are trying to manipulate the forward curve, I don't think there's any doubt about that.

**Erik:** Moving on to Page 3, you're showing us essentially the effects of OPEC production cuts, taking 600 million barrels out of the global market. Walk us through this slide. Tell us what's going on here.

**Art:** All I did was go back to November 2016, which was when the production cuts were announced, and I started adding up – the cumulative barrels show the – they had a target of something like 1.8 million barrels a day, but I didn't really worry too much about that – and I just took country by country and added them up. What did they actually produce relative to that November 2016 baseline? And that's what the chart shows.

And, as it turns out, they didn't meet their 1.8 objective. The average was 1.5. But, you know, good enough. But as you sum those numbers all the way along, you end up with a net of 596 million barrels of liquids taken off the market. Anyone who doesn't think that's pretty significant, I guess we need to talk about that.

And, following off your previous question about how much of a threat to Saudi Arabia slash OPEC Plus is tight oil, I've done the same exercise for how much oil has – tight oil, play that over the same time period. And it's a significant volume. It's almost 160 million barrels. But, compared to 600 million, I wouldn't say it's an insignificant volume, but it pales.

So, to me, that's why the price war narrative is a little bit specious. It turns out, at least so far, that the volumes between OPEC and US tight oil are just not yet comparable. It's really that simple.

**Erik:** You make an excellent point that those are very different numbers. But I just want to come back to the trend that's developing here. Now, what we have seen in recent months is we know for a fact that there has been a whole lot of hedging. Because we've seen that in terms of the swap dealers' net short positions in the Commitment of Traders reports.

Now, it's true that some of that hedging may have occurred just to refinance existing debt. And we don't know how much of the hedging occurred for that reason. But if you look at history, it generally teaches us that there's a lag of three to four months between the price of WTI and the rig count really turning up to indicate a bunch of new drilling activity.

And, by those metrics, right around the time that you told us (very accurately) that prices were about to really take off, back in October, which is exactly what they did – It's right about now that that should translate into a bunch of new drilling activity.

And, of course, as you have said many times, rigs don't produce oil, oil wells do. So we've got to get not just drilling activity but fracking and completion of those wells. At some point, it seems to me that there ought to be a whole bunch of new US shale production coming online.

But, boy, it's not spooking the market in terms of price at all. Nobody seems to be afraid of what happens in 2018 once more US production comes online. And we're already seeing big increases in US production. Almost 10 million barrels a day. On par with Saudi Arabia in terms of how much oil we're producing. And it's set to be more.

So am I missing something here? Is it not really set to be as much more as I think? Or is it just that OPEC has a bigger hammer and their numbers are so much bigger that even if this 157 million barrels were doubled it's still a small proportion of OPEC's number?

If I look at what's coming in 2018, I believe – although, obviously, in 2017 we've seen big drawdowns in inventory – I think that EIA has forecast that that would turn around to a surplus in 2018. Do you agree with that? And how much more oil do you think is coming as a result of the drilling that's starting to pick up now?

**Art:** You've gotten right to the core of the question and the problem, Erik. If we go to Slide 4, what we see there are two graphs (and I won't bother with the first one because that's really just addresses this notion of is there a war).

But the one on the right I think is worth looking at. And what it shows is on a tight oil play-by-play basis – this is incremental production – since April 2015, which was the previous peak in US tight oil production. And what we see there, just simplistically, is that the Permian Basin is the only play that's really expanded in a meaningful way. The Eagle Ford has pretty much petered out. Bakken has more or less returned to where it was. And the Woodford and the Niobrara are not really a big part of the story.

So, as many people clearly understand, it's really all about the Permian. So, you know, looking at the numbers, we're ahead of where we were for tight oil production in 2015, but not hugely ahead.

The real story is in Slide 5. And Slide 5 addresses – you've mentioned one of my favorite axioms, which is that rigs don't produce oil, wells do. And the other axiom I'll introduce is that not all oil is equal. And, of course, EIA and IEA, they know that. But that's not really included in their forecasts. They're smart people, so I don't want to take that away from them. But they seem to lose track of the fact that not all oil is equally refinable, equally valuable, and therefore adds equally to the market.

So if we look at the graph on the left, what I've done there is to divide US conventional production by API gravity, which is just how light or how heavy the oil is – the lower the number the heavier, the higher the number the lighter. And the important thing for everyone to understand is that the average input to US refineries is about 32 API gravity (which is in that cyan blue color), of which there is a fair amount in the conventional part of US production. And without a magnifying glass you're not going to be able to find it in the unconventional or the tight oil portions.

So what that says is that most of the oil that comes from the Permian Basin and the Eagle Ford and the Bakken and all of that is not refinery-ready. You can't just stick it into a refinery and manufacture gasoline and diesel and all that other stuff out of it. And that's a real problem. Because the world – their refineries are designed just like ours. So you either have to send it to some very specialized refineries, of which there are some, in China, in Latin America – their volume is constrained and you have to compete with other light oil to get in, which means discounting. Or you have to blend it with a lot of heavy oil.

The graph on the right breaks down the various Eagle Ford, Permian, Bakken, the main sources of tight oil – the type section or average tight oil – and then conventional. And you see the problem real clearly.

And that is that there's almost no refinery-ready oil from the tight oil plays. So what that says is you can produce as much as you want of this stuff. And let's forget for moment about the lack of availability of frack crews and completion and the things that you talked about. Let's assume you could just readily turn a well into supply. You still don't have refineries that are capable of turning it into a commercial product. And that's a huge problem.

So the numbers are on the graph – only 2% of US tight oil is refinery-ready. 12% is what we call light, which is with a little bit of tweaking, blending, you can pretty quickly get it into a refinery. And 85% of it is ultra-light.

What does that mean? Forgetting about the technicalities, what that means is that, even if you can refine it somehow, it makes crappy gasoline, low-octane gasoline that has to be put through some other process to add octane, to make it commercially sellable.

The other thing that's an even bigger hit against it is that it contains no middle distillates. And, forgetting the technicalities, that means you can't make diesel out of it. So it's not good for gasoline, although you can fix it at cost. And it's no good for diesel. And those are the two biggest commercial products that crude oil produces.

So, here's the problem. And nobody as far as I can tell – I won't say nobody, but certainly almost nobody – at EIA or IEA is addressing this problem. You can produce all of it you want. You can't use a bunch of it. That is a huge problem.

**Erik:** Art, I want to back up for just a second to the economics of these different shale plays. Now, the way that I understand this – and you can tell me if I've got it wrong – the Bakken and the Eagle Ford and the Permian, they were all going like gangbusters up through the middle of 2014.

When we had the big oil price selloff, as I understand it, what happened is the Permian was the one where it was still economic to drill new shale wells. Even at \$40, \$50, \$35 oil, there were still economic plays in the Permian. But at those prices, the Bakken and the Eagle Ford and the

other plays were no longer economic.

Now, if that's the logic, as we go back up to \$75, \$80 oil prices does that mean suddenly that the Bakken and the Eagle Ford get ramped back up to their former glory? Or are those plays played out for some other technical reason?

**Art:** The issues are many. But let's talk first of all just about price. There are substantial areas in the core of the Eagle Ford, the Bakken, and the Permian that make perfect economic sense at somewhere between \$40 and \$50 per barrel. Depending on the operator etc. So there is no problem, particularly, or huge distinction based on just breakeven price.

Now, breakeven price doesn't mean you're making any money, and that's a real problem if you're an investor. But we'll leave that aside for the moment. What is most interesting is that the Bakken and the Eagle Ford are more mature plays. We've been drilling wells in these tight oil objectives for many, many years. Whereas the Permian, even though it's an old, mature basin, most of the objectives – certainly the Bone Spring and the Wolfcamp – to a lesser extent the Spraberry possibly – these are relatively new plays.

So there's more core locations left to drill that have not already been drilled. And certainly over the last three years of low oil prices, if it is a problem, the Bakken and the Eagle Ford drilling has absolutely collapsed to the very best locations. And so at this point I think they're pretty nearly, if not almost altogether exhausted in terms of additional commercial locations. Maybe I'm overstating that.

But the Permian is advantageous, or is viewed more positively than the two older plays. Number one because it has more virgin locations, more undrained, unswept locations left to drill because it's a less mature play.

And the other thing is just a simple matter of economics. People think that EUR (estimated ultimate recovery) is the key to economics. And it's certainly important. But it turns out, interestingly, that production rate is actually the most important sensitivity.

And the Permian has very high initial rates. What that means is on a net present value basis you get your money back faster. The Bakken is probably – well it is – of the three plays at the low end. It probably has the best EURs, but it takes a long time to get your money back because the rates are relatively low. And the Eagle Ford is somewhere in between.

So you roll all of that together, and those are the main reasons that the Permian is better. But there are plenty of areas in all three plays that should make money at relatively low oil prices.

So, if that's not enough, then let's add to it the fact that the cost of oilfield services have started going up again. And one of the reasons that you could make money at \$40 or \$45 was because the cost of drilling rigs and completions and fracks and all of that had gone down 40% or 50% from the peak, the boom days that you talked about, in mid-2014. If your costs are lower, your



breakeven price is also lower.

The other thing that's important to understand is – I can show you maps that I've made and I believe they say Company X ought to be able to break even at \$45, and yet I go and look at their income statements and their balance sheets and they're spending more money than they're making. So what's the deal?

They're not making money is the simple truth. At least the way I define it, which is capital expenditures divided by cash flow from operations. Other people might define it differently, but to me that's the bottom line.

And the reason for that is that these companies have a lot of other expenses. They're in debt, they've got interest expense. They've got overhead. They've got all kinds of stuff.

But, most importantly, it's all these damned DUCs. You drill a well and you don't produce it, you don't complete it, and you don't have any revenue from it. And that is an absolute no-no, to put it mildly, from a net present value standpoint. You go out and you spend two or three million dollars to drill a well and then you postpone any earnings for three or four years. Ouch. How can you ever get out of that deal?

Well, I don't want to go into that, but we talk about these DUCs as if they're kind of a cool thing. They're not cool. They're a very uncool thing from an economic standpoint.

So I look at, on the one hand, these guys ought to be making money. On the other hand, I go and look at their 10-Qs and their 10-Ks, their SEC filings, their income tax statements if you will. And they're not making money. Not all of them, but most are not. And those are the reasons why.

**Erik:** And, for the benefit of any of our listeners who may not be initiated, we're not talking about quack-quack ducks, but drilled but uncompleted wells, D-U-Cs is what you mean when you say "duck." Just to make sure that we're clear.

Now to another subject that I think you and I very much agree on, which is the legalization of export of crude oil out of the United States has changed the game considerably. Moving on to Slide 6, what are we looking at here?

**Art:** We're looking at the difference between the price of international oil or Brent and WTI or the Brent/WTI spread, and weekly crude oil exports that are now legal from the United States. And what we see pretty clearly there is that the increase from about 8 or 9 hundred thousand barrels a day clear up to 2 million barrels a day of exports coincides perfectly with the widening of that Brent/WTI spread.

And the reasons are very simple. It's an arbitrage issue. It shows there that the maximum was \$7.24. If I can get \$5 or \$6 – even more – by selling the oil internationally than I can

domestically, then I can afford to discount my price by a couple of dollars so that foreign customers have incentive to buy my oil as opposed to what amounts to higher-priced oil from someone else. And I'm still making more money than if I sold it here in the United States.

So arbitrage has been key. Now this graph is a week old, and that Brent/WTI spread has plummeted in the last week. It's gone down to about \$2.50 or \$2.75 just this week.

**Erik:** What do you think is behind that?

**Art:** Boy, I wish I knew. I've analyzed it. And one theory that is certainly partly true is that a new pipeline called the Diamond Pipeline is now bringing Bakken crude directly to a big refinery in Tennessee, bypassing Cushing altogether, and displacing light oil from South Louisiana and tight oil from Texas, which is now kind of stranded. So that's one theory, and I think it's part of the reason.

But we have gone through, I believe, a brief period of structural price adjustment – getting back to your question about how the long positions are a little bit overfilled. And yet, today we had an increase in comparative inventory and a pretty big build in crude oil and the market didn't seem to care all that much.

So are we done with that? Who knows. The point is that I don't fully know the answer. But what's basically happened over the last week is that Brent has gone down almost \$3. LLS, Louisiana light crude, has gone down about \$1.50. And WTI is about flat.

So, for whatever reasons, the spread has narrowed and we really need to see what happens with the export market. That's probably a negative for ongoing high volumes of US crude oil exports. But we'll see.

**Erik:** We've got Pat Hemsworth coming on after you, and she has a lot of hands-on exposure to those markets. So we look forward to getting her perspective as well on that subject.

Moving on to Slide 7, you're pointing out here that exports have been the primary reason behind US inventory reductions. That makes me wonder. For whatever the reason (I hope Pat will have some perspective on it), we are seeing a tightening of the Brent/WTI spread. We are seeing, therefore, that arbitrage incentive for a lot of US export is declining.

Do you think that that will change the trend in US inventory reduction and potentially change the trajectory of this price rally that we're seeing?

**Art:** It could change the export of crude oil. To me, that's the vulnerability. And that's not a trivial issue. As the graph on the right on Slide 8 is showing, on average 2017 saw an increase of something like 3.8 almost 4 million barrels a week coming just from crude oil exports. So if that arbitrage is less than official, then we might expect to see that go down.

The argument on the other side is that there's a high level of interest in securing diverse sources. Remember that an awful lot of this crude oil export is now going to China. It used to be Canada was not only our number one but just about our only export destination. Now we're sending more oil to China and East Asia in general and Latin America than we are to Canada, though Canada's still a big player on exports.

So we know that the Asians have got an eye towards strategic concerns, not just necessarily bottom line. But the larger answer is that – it's the graph on the left – it's the export of refined products that, to me, is really the steady upward movement that's drawing down inventories. It's the export of gasoline and diesel – diesel number one, gasoline number two – that is really sustaining the whole export drive.

So it wouldn't surprise me if crude oil exports averaged out at maybe a million barrels a day, as opposed to the 1.2 or 2.7 year-over-year that we've seen. And that will slow inventory reduction. But, again, remember we're at the five-year average. So we don't have to keep this heavy-duty reduction going on to maintain high prices or higher prices, or even have them go up.

So right now I think the world's appetite for US refined products continues to grow. And I don't see any end in sight. Unless the entire global economy goes south. And that's always a possibility that we have to keep in mind.

So, overall, the answer is we want to look very carefully at whether crude exports decline, if this Brent/WTI spread continues to stay narrow. But I'm going to be looking more to make sure that the refined product export remains strong.

**Erik:** Moving on to Slide 9, the final slide, I see on the left here we have your famous yield curve, which really is the epitome of your pricing model that we've talked about in your past interviews. So, I guess the question that comes to mind is – you've illustrated in a very compelling way here that we've really drawn back down to the five-year average. But EIA as well as some analysts have anticipated that we'll go back to a supply surplus in 2018.

Do you agree with those forecasts? And I guess what I'm really asking is does this trend continue? Where we keep drawing down and we get below the five-year average?

Or was this more a case of OPEC managed us back down to the five-year average because that's where they wanted us and they're going to now manage their production in a way to keep us at that level?

Where do you think we're going from here?

**Art:** I don't know, to be honest. But, since this is about my opinion, I'll tell you my opinion. And my opinion is that we were below the five-year average through much of the boom days of late 2010 through mid-2014. There's nothing at all abnormal about being below the five-year

average. And, if OPEC is in the business of making money, which I believe they are, then up to a certain point higher prices benefit them.

Now, they also have a keen eye towards demand destruction. There is some price at which people cut back on the use of petroleum, and that's not favorable to exporting countries. So they're going to watch that.

But as I read the comments that came out of this recent OPEC meeting, what I heard was that they're not where they want to be. I heard Khalid al-Falih say that maybe inventory reduction to the five-year average isn't going to be the metric that we want to use going forward. I'm not quite sure what he intends to use, but – and the other thing I heard him say was that we are in this with our partner Russia for the very long term. You know, years.

Now, I don't necessarily believe everything that comes out of anybody's mouth, but that's what was said. Everything that was said led me to believe that they're not done yet.

Now, whether they can hold their coalition together, that's a whole other conversation. But at least notionally I don't think they're done managing it.

So what the yield curve shows and what I believe is really driving all of this is – we've talked about this before, and everybody I think who's listening is aware of the fact that there's been a huge level of underinvestment in exploration and a fair level of underinvestment in development over the last three years. That alone is going to cause a lot of upward pressure on prices.

The situation in Venezuela – some people like to say, OPEC is not really managing it, they got lucky that Venezuelan production is cratering. Well, okay, sure enough. But that's another situation that we're going to watch.

But, to me, the real issue is – the big picture, zooming out from what inventories do on a week-to-week basis, we're in trouble here. We're in trouble in that we have not spent enough money. We haven't invested enough in exploration and production.

A lot of the build in the US production is offshore Gulf of Mexico. It's not all shale. People need to bear that in mind. I don't see the shale players getting their frack crew availability up to where they need it for some time yet.

And then there's the issue of the crude oil quality.

So, the final slide on the right is just showing that gasoline and distillate, which are the two cash cows of the whole US petroleum machine, are at levels that – this is, again, comparative inventory – that they haven't been at since the beginning of this price collapse.

So I have to look at all this in a relatively positive way. That doesn't mean that I don't have

concerns. Because I do. I always do. And I don't know the future. But I do know the trends. And the trend has been pretty relentless since mid-February 2017. And, with a few hiccups here and there, it continues to move up that yield curve. So that's where I think we're going.

**Erik:** Finally, Art, I have one last question for you. I know that you follow Pat Hemsorth on Twitter, as do I, and you have a lot of respect for her work. We are fortunate enough to have her joining us after your interview. She will have listened to this.

So my question to you is what question do you have on your mind that I should ask Pat? Because, obviously, she's much closer to the physical markets than either you or I are.

**Art:** Right, Erik, and you're correct in that I pay close attention to everything Pat says and have tremendous respect for her and her opinions.

So what I would like Pat to answer is the question that I said I didn't know the answer to. Which is, why exactly has there been the sharp contraction in Brent/LLS out of Louisiana – light Louisiana oil – and WTI just this week?

Has it got to do with this Diamond Pipeline? Has it got to do with something structural that's going on in Europe? Is there some kind of correction going on? That's what I would like to have Pat explain to me, and probably many of your listeners have the same curiosity.

What's going on there, Pat?

**Erik:** Super. Well, Art, as we close, I want to encourage our listeners – anybody who's interested in oil markets and is not already subscribed to your free blog at [artberman.com](http://artberman.com) is crazy. Because it's free and it's fantastic content. The charts and graphs that you post there are the same level of quality as what you see in this week's presentation.

What else can people do, where can they follow your work, for people who would like to find out more about you? And give us a quick rundown on what you do at Labyrinth Consulting.

**Art:** The website is a great place to go. The website includes all my Twitter feeds. I'm [@aeberman12](https://twitter.com/aeberman12) if you want to know what I'm thinking on a day-to-day or even hour-by-hour basis. That's the real current place. You get to hear everybody say, no, no, no, Art, you're completely wrong and here's why. So it's real time.

But what I do at Labyrinth Consulting Services is mostly I consult on commodity price trends, supply/demand trends. And a lot of my clients are investment funds, hedge funds, managed money, who are trying to understand the risk factors, basically, that go into their portfolio selections and their bets on crude oil and natural gas.

**Erik:** Well, Art, I can't thank you enough for another fantastic interview. Patrick Ceresna and I will be back as MacroVoices continues. And we'll be joined by Pat Hemsorth, who is a

commercial oil broker. So be sure to keep it tuned right here to [macrovoices.com](http://macrovoices.com).