Weekly Fundamental Market Report May 7-11, 2018

Market Update

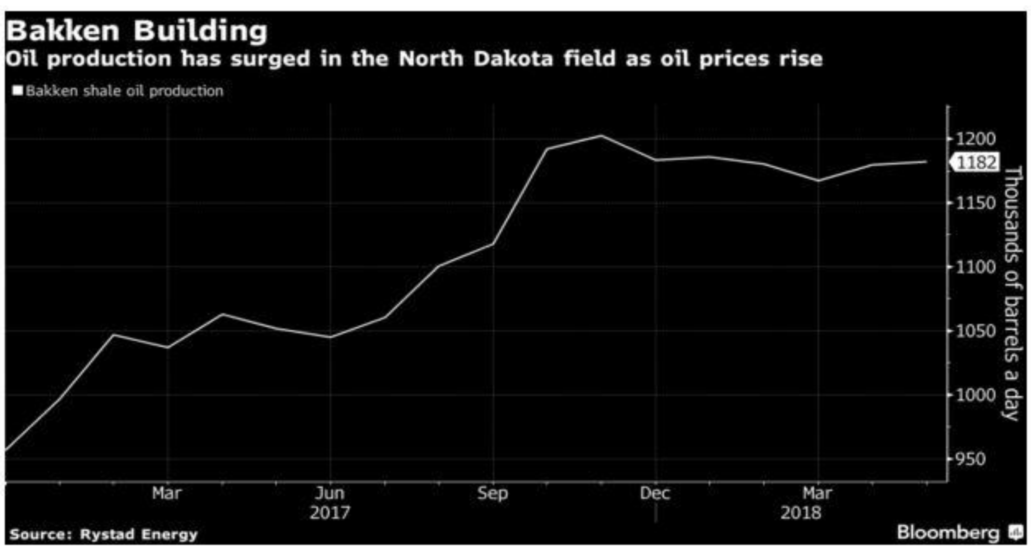
PRODUCTS	5/7/18	5/8/18	5/9/18	5/10/18	5/11/18
WTI Crude Oil	70.73	68.83	71.16	71.36	70.70
Brent Crude Oil	76.17	74.16	77.60	77.47	77.12
Natural Gas	2.74	2.77	2.75	2.78	2.75

- **CME Group**

Headlines

Local North Dakota

- **Bakken Shale Getting Back 'In-the-Money' With U.S. Oil Nearing $70.** **Bloomberg**
  - With breakthroughs in drilling technology reducing costs and crude oil prices near $70 a barrel, wells in North Dakota are turning into cash cows. The cost of getting oil and gas to the surface in North Dakota's Bakken field has fallen, recently hitting $41 to $50 a barrel for the top-quartile wells in the region, according to a Bloomberg New Energy Finance report. Challenges remain in the region, which is plagued by a lack of gas pipelines to take the fuel to more-promising markets, leading to an increase in flaring, the practice of burning the gas coming out of oil wells. Technologies like fracking and horizontal wells, reaching lengths never before seen, have led to big reductions in costs across shale basins in the U.S. This has helped most average wells in the Bakken become economical. If West Texas Intermediate oil prices stay above $63 a barrel, all average wells will be "in-the-money," BNEF analyst Jacob Fericy said in the report. "The current upswing in prices we've seen, it's really helped a lot of Bakken producers," Fericy said by telephone. "The Bakken is definitely price-sensitive.'



Domestic U.S.

- **Oil prices fall as Iran nuclear deal retains support.** **Reuters**
  - Crude prices fell in a see-saw session on Friday, retreating after early gains as it looked likely that U.S. allies would push to maintain a deal with Iran, which could keep that country's crude exports on global markets. In another sign global supplies could rise further, data in the afternoon showed U.S. crude producers added 10 rigs in the latest week. Crude prices remained just below multi-year highs, with Brent on track for a weekly 2.8 percent gain and U.S. crude a 1.2 percent weekly rise. "It's the same witches brew of bullish stuff: Iran, Venezuela, the lack of alacrity by Saudi Arabia to bring more oil onto the market," said John Kilduff, partner at Again Capital in New York. Brent crude LCOc1 settled down 35 cents at $77.12 a barrel, just below the $78-level hit on Thursday, its highest since November 2014. The benchmark contract remained lower in post-settlement trade. U.S. light crude CLc1 was down 66 cents at $70.70, off a 3-1/2 year high of $71.89 it hit on Thursday. The United States plans to reintroduce sanctions against Iran, which pumps about 4 percent of the world's oil, after President Donald Trump this week abandoned a 2015 deal that limited Tehran's nuclear ambitions. Many analysts expect oil prices to rise as Iran's exports fall. Still, British Prime Minister Theresa May on Friday reiterated her support for the Iran nuclear deal and agreed with Trump that talks were needed to establish how U.S. sanctions would affect companies operating in Iran. U.S. investment bank Jefferies said in a note it expects Iranian crude oil exports to start falling in the next few months. However, there were signs that other members of the Organization of the Petroleum Exporting Countries (OPEC) will raise output to counter the Iran disruption. Jefferies said OPEC has the capacity "to replace the Iranian losses" but added: "Even if physical supply is held constant ... the market will still be faced with a precariously low level of spare capacity." Outside OPEC, U.S. crude production C-OUT-T-EIA reached another record high last week, hitting 10.7 million bpd which is up 27 percent since mid-2016. U.S. output is creeping closer to that of top producer Russia, which pumps about 11 million bpd. U.S. drillers added rigs for the sixth straight week, bringing the total rig count to 844, highest since March 2015, General Electric Co's Baker Hughes energy services firm said. More than half the total oil rigs are in Permian basin in west Texas and eastern New Mexico, the nation's biggest shale oil field. Active units there increased by five this week to 463, the most since January 2015.

- **Shale Producers Show Budget Restraint but Can the Sector Keep Up with Demand.** **Forbes**
  - Now that President Donald Trump has officially exited the Iran nuclear deal, it's time for oil markets to refocus attention on other variables that influence prices. As a bona fide – albeit imperfect – swing producer, America's shale sector merits close attention. Lost in all the Iran hoopla was the announcement of stellar first-quarter financial results from America's leading shale producers. Most are now generating significant free-cash flow, meaning incoming revenue exceeds a company's capital investment, giving them the option of paying down debt or rewarding shareholders with dividends or stock buybacks. This development is a big deal and could be a major inflection point for a sector that in recent years has been criticized for its "cash burn," most famously by hedge fund manager David Einhorn in 2015. Of course, higher oil prices are having a significant impact on shale producers' financial results. But the sector is also showing discipline by not pumping all of its cash back into new drilling projects. Exploration and production companies have a long history of outspending cash flow since investors have traditionally rewarded them almost exclusively based on their growth rates. But as top shale producers, including ConocoPhillips, EOG, Apache, Devon, Anadarko, Continental and Whiting, announced first-quarter results in recent weeks, there were no blockbuster announcements about big hikes in capital spending or major increases in production guidance. Whiting Petroleum, a top producer in the Bakken, has been generating a steady $100 million per quarter of free-cash flow recently, while Devon's first-quarter report was highlighted by the announcement of a $1 billion share buyback program and a 33% hike in its dividend. The shale industry is often broken down to the "haves" and the "have-nots" – in terms of those who hold the best rock in the premier shale basins. However, with West Texas Intermediate (WTI) prices trading around $70 a barrel – or as much as $15 a barrel above shale companies' budgeted levels for 2018 – even the "have-nots" are performing well. A recent survey of more than 40 domestic producers showed incremental capital spending at $2.3 billion for 2018, leaving over $22 billion in incremental free-cash flow for the year to date. Whether the focus on returns persists across the shale sector in the face of rising oil prices, especially now that the Trump administration has shown it is serious about re-imposing sanctions on Iran's energy industry, remains an open question. This now becomes an even more critical question for oil markets, nearly as important as how long OPEC maintains its 1.8 million barrel-a-day production cut deal. One thing looks clear, investors

for now aren't backing away from their demands for higher cash returns from producers. Wall Street watched more cash burn in past years then many were comfortable with. Now they would like to see the sector mature to the point where they don't need to worry about slashed dividends or buybacks being halted due to fluctuations in oil prices. Investors seek a smarter, more efficient shale sector. But if prices push past $80 a barrel or higher – many are forecasting a global supply shortage after all – investors could reverse course and demand growth once more. Such is the impulsive, push-pull relationship between Wall Street and the shale sector. Given the pipeline and infrastructure rates emerging in key basins, it should also be asked how much faster the shale sector could grow if under higher prices. Constraints in the oil and gas industry's "midstream" sector – pipelines and terminals – are already forcing producers in West Texas's Permian to sell oil for as much as $12 a barrel below the WTI pricing hub in Cushing, Oklahoma. Many foresee Permian takeaway capacity for natural gas – which, unlike oil, can't be trucked – hitting a wall next year and stunting the play's production. Midstream companies, saddled with debt and dividend obligations that are preventing them from investing in long-term solutions to transportation bottlenecks, are not faring as well as their upstream cousins. Investors may have to accept lower dividends from midstream firms in order for the sector to invest in the necessary infrastructure. Producers will also need to accept higher rates from oil services companies – drilling contractors, pressure pumpers and frac-sand providers – which have yet to reap the fruits of the economic recovery and bounce back of oil prices. Ultimately, these higher costs could eat into producers' profit margins. The interplay of these dynamics across America's oil industry merits closer attention as prices continue to march upward, particularly now that OPEC's number three producer once again faces potentially crippling sanctions.

Oil and Gas Analysis

- **Rotary Rig Count Summary**

Location	Date	Week	+/-	Week Ago	+/-	Year Ago
United States	4-May-18	1032	11	1021	155	877
	7-May-18	1045	13	1032	160	885
North Dakota	4-May-18	56	1	55	13	43
	7-May-18	56	0	56	12	44
Canada	4-May-18	86	1	85	4	82
	7-May-18	79	-7	86	-1	80
International	Apr-18	978	6	972	22	956

- **Baker Hughes**

- **WTI & Bakken Spot Price**

May 2018 Daily Spot Prices					
	Mon	Tue	Wed	Thu	Fri
Bakken (FH)					
2018 April-30 to May-4	60.02	60.02	60.75	61.25	61.25
2018 May-7 to May-11	62.46	62.81	62.81	62.85	63.15
WTI					
2018 April-30 to May-4	68.56	67.28	67.91	68.45	69.71
2018 May-7 to May-11	70.74				
Differentials					
2018 April-30 to May-4	8.54	7.26	7.16	7.2	8.46
2018 May-7 to May-11	8.28				

•Flint Hills Resource
•EIA

- o **Weekly Petroleum Status Report**

Stocks (Million Barrels)			
	Four Weeks Ending		
	5/4/2018	4/27/2018	5/5/2017
Crude Oil (Excluding SPR)	433.8	436.0	522.5
Motor Gasoline	235.8	238.0	241.1
Distillate Fuel Oil	115.0	118.8	148.8
All Other Oils	401.6	395.0	423.1
Crude Oil in SPR	663.6	664.3	688.8
Total	1,849.7	1,852.0	2,024.2

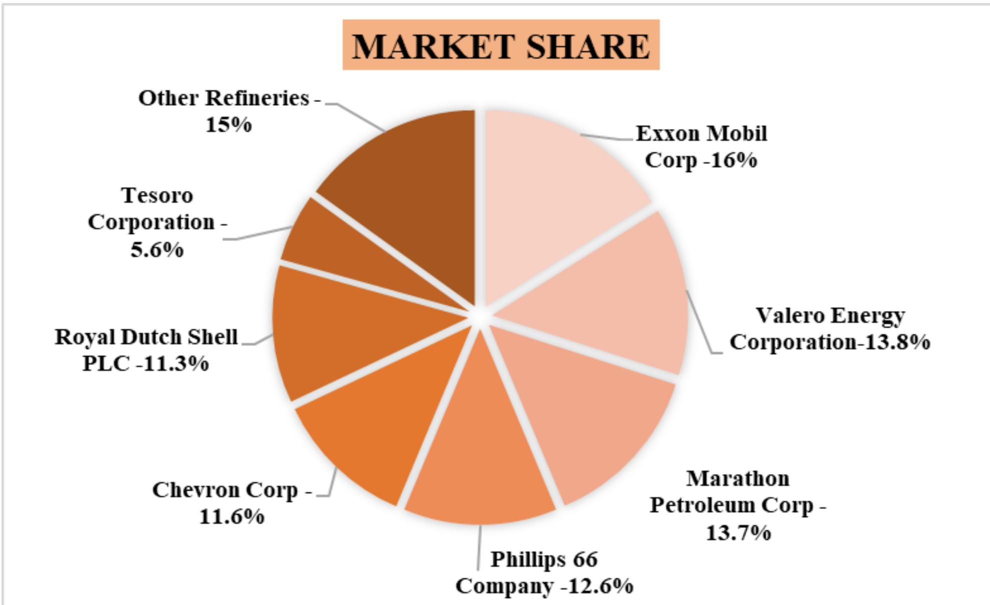
Products Supplied (Thousand Barrels per Day)			
	Four Weeks Ending		
	5/4/2018	4/27/2018	5/5/2017
Motor Gasoline	9,451	9,326	9,248
Distillate Fuel Oil	4,224	4,190	4,060
All Other Products	6,611	6,587	6,439
Total	20,287	20,103	19,747

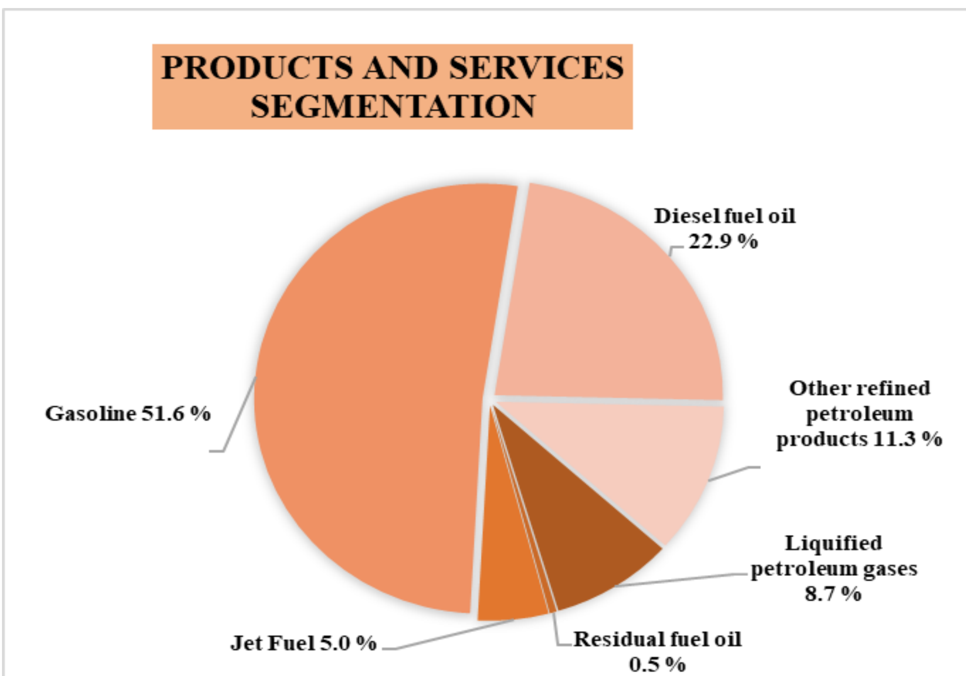
Refinery Activity (Thousand Barrels per Day)			
	Four Weeks Ending		
	5/4/2018	4/27/2018	5/5/2017
Crude Oil Input to Refineries	16,654	16,788	17,040
Refinery Capacity Utilization	91.2	91.9	92.9
Motor Gasoline Production	10,027	10,071	9,835
Distillate Fuel Oil Production	5,015	5,080	5,068

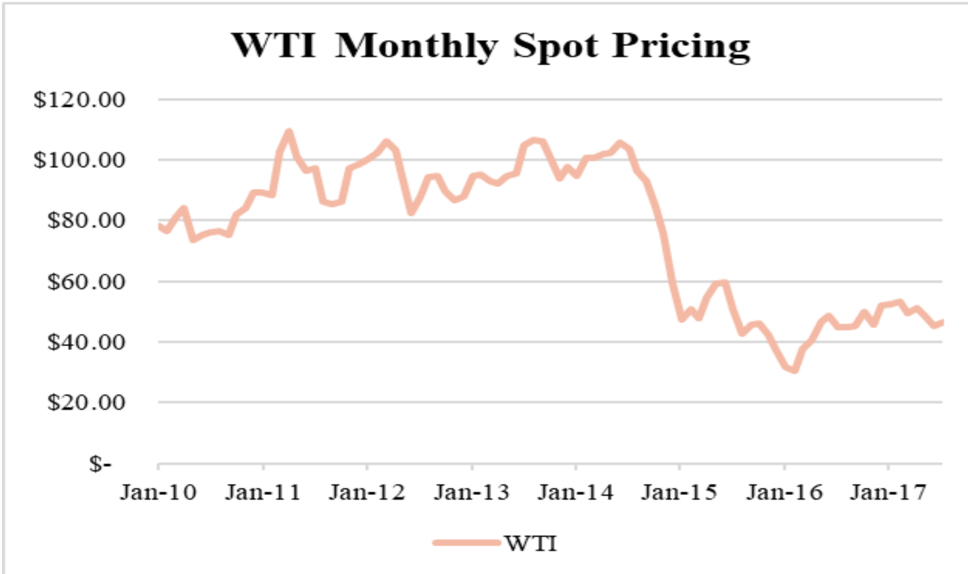
Net Imports (Thousand Barrels per Day)			
	Four Weeks Ending		
	5/4/2018	4/27/2018	5/5/2017
Crude Oil	6,042	6,541	7,415
Petroleum Products	-3,037	-3,247	-2,626
Total	3,004	3,295	4,788

  - **EIA**

- **US Petroleum Refining at a Glance**







- **EIA**

o Key External Drivers

- **World price of crude oil**
  - http://markets.businessinsider.com/commodities/oil-price?type=wti
- **Demand from gasoline and petroleum bulk stations**
  - https://www.reuters.com/article/us-usa-natgas-kemp/u-s-natural-gas-prices-rise-as-winter-stocks-look-tight-kemp-idUSKCN1BU1RK
- **GDP of mainland China**
  - https://tradingeconomics.com/china/gdp
- **Trade-weighted index**
  - https://www.investing.com/news/economy-news/top-5-things-to-know-in-the-market-on-friday-541066
- **Total vehicle miles**
  - https://www.advisorperspectives.com/dshort/updates/2017/08/31/vehicle-miles-traveled-another-look-at-our-evolving-behavior