Weekly Fundamental Market Report November 19-23, 2018

Market Update

PRODUCTS	11/19/18	11/20/18	11/21/18	11/22/18	11/23/18
WTI Crude Oil	57.16	53.39	54.63	-	50.42
Brent Crude Oil	64.14	61.50	61.65	-	57.69
Natural Gas	4.65	4.52	4.45	-	4.31

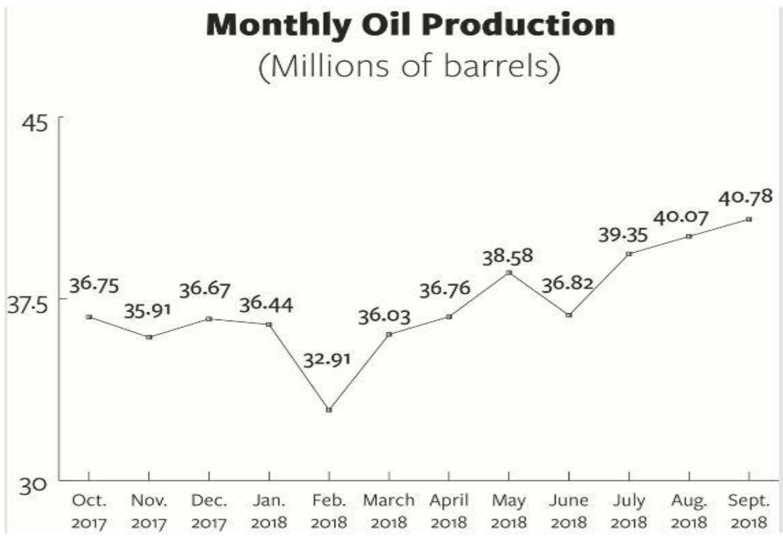
- **CME Group**

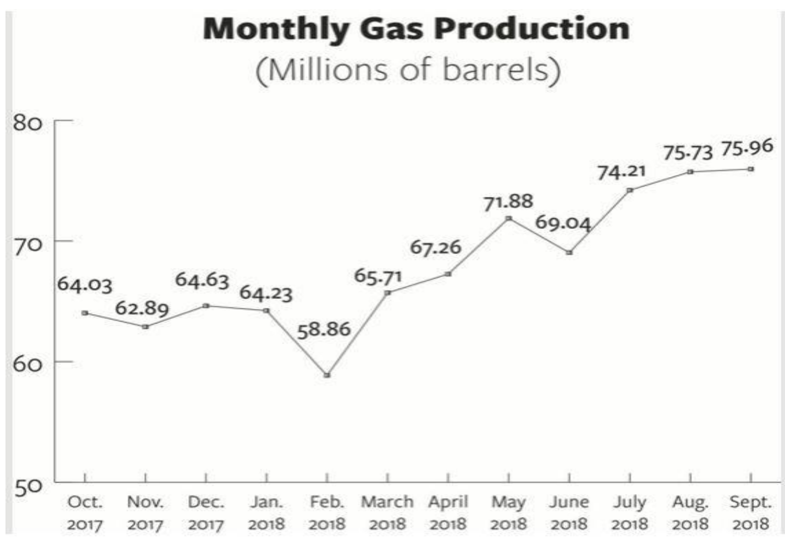
Headlines

North Dakota

- **North Dakota posts record oil, gas production ahead of price crunch. Williston Herald**
  - North Dakota posted new all-time highs for oil and gas production in September, just ahead of a price crunch that began in October that is likely to contribute to dampening activity in the upcoming months. Oil tagged 1.36 million barrels per day production in September, an increase of 66,751 barrels month over month, according to the state's monthly production report. Gas production, meanwhile, tipped 2.532 million cubic feet per day, an increase of 89,008 cubic feet per day month over month. The price situation is likely to change, Helms suggested, with OPEC planning to meet Dec. 6 to decide whether to cut production. North Dakota sweet crude has been at $40, and Bakken crude about $5 to $6 above that, Helms said, which is well below the numbers it would take to grow rig counts or add a lot of wells to inventory. Several factors are contributing to the price crunch. U.S. Sanctions against Iran were to have reduced production by a million or so barrels per day, which prompted OPEC to increase production. But, President Donald Trump granted waivers to several countries, and said in press conferences that he was doing that to lower oil prices. U.S. production, meanwhile, has not slowed, and is expected to reach 12 million barrels per day next year. "With the weather conditions, the lack of workforce, and the transportation issues, that's going to slow activity and growth for the next few months," Helms said. In addition to its output records, the state also captured a record 2.075 million cubic feet per day of gas, but still missed its 85 percent gas capture goal. That amount was 83 percent of the statewide Bakken production. October will be worse, Helms said. The ONEOK Stateline plant had a fire and was down for maintenance, for one thing, Helms said, and the Wild Basin plant is not yet fully operational as planned. "I think the producing industry didn't anticipate those two things happening, so they completed wells and put wells online and the gas had no place to go," Helms said. "So I think October is not going to look very good in terms of flaring just because of that." Helms didn't think restrictions were necessarily likely, however. Many of the instances of flaring are more likely to fall under force majeure or some other exemption in the gas capture policy. New flaring regulations requiring 88 percent have also gone into effect as of Nov. 1, but the Division of Oil and Gas has been directed by the North Dakota Industrial Commission to review the state's flaring regulations. Whether that will mean a change in the state's gas capture target has been unclear. Questions about the review process the Division of Oil and Gas planned to engage in were deferred to the monthly production report, but during the Director's Cut, Helms said he has only just been through a first draft of the recommendations. They are going to be presented to the NDIC on Tuesday, he added, so it is too soon to comment on them. Most of the issues with gas capture continue to reside on Fort Berthold, Helms said. Fort Berthold captured just 71 percent of its gas, while the rest of the state met the 85 percent target. Gas capture rules on the reservation are going to be changing, Helms added. New, revised venting and flaring rules now call for the Bureau of Land Management to defer to state and tribal regulations. "They are going to negotiate an agreement with the state for us to tell them when a well is

in non-compliance," Helms said. Any well not in compliance with state or tribal regulations will be considered avoidable flaring, and will have to pay royalties on that flared gas. "So, everything is going to change about how flaring and gas capture is regulated in North Dakota," Helms said. The new BLM rule deferring to the state and to tribal governments is to take effect Nov. 27. "With Thanksgiving coming and the fact they just came and told us about it this week, no one expects the agreements to be in place by that time," Helms said. The new rule will affect December's production going forward, Helms added, which won't be reported until Feb. 5. "With legislators in town, it's going to be a really busy month," he said. "There's a lot of work to do to figure out how we are going to regulate flaring in North Dakota in January and have it in place by the fifth of February."





Domestic

- **Oil tumbles more than 7% to $50.42, now down more than 30% in 7 weeks.** CNBC
    - Oil prices fell on Friday to their lowest levels in more than a year, deepening a rapid seven-week sell-off that has plunged crude futures deep into a bear market. Friday's declines further ramp up the pressure on OPEC ahead of a much-anticipated meeting between the influential oil cartel and its allies in Vienna on Dec. 6, when they are expected to announce that output will be curtailed. So far, the prospect of the Middle East-dominated group orchestrating a fresh round of supply cuts has done little to prop up crude futures. U.S. benchmark West Texas Intermediate crude ended Friday's session down $4.21, or 7.7 percent, at $50.42. WTI hit its weakest price since mid-October 2017 on Friday. International benchmark Brent crude dropped $3.66, or 5.9 percent, to $58.94 by 1:34 p.m. ET. The contract hit its lowest level since late October 2017. WTI has now lost 34 percent of its value from its peak on Oct. 3 to the trough on Friday. Brent has fallen as much as 32 percent. "I have to say that the speed in which the oil market has declined has surprised me even as OPEC and non-OPEC members discuss a production cut," said Andrew Lipow, president of Lipow Oil Associates. "The market does not think it will be enough." The latest wave of energy market selling comes amid escalating concerns about an increase in global supply and a slowdown in economic growth. Saudi Energy Minister Khalid al Falih on Thursday said the kingdom's output this month would surpass October's production of 10.6 million barrels per day. That is near an all-time high but below the 10.7 million bpd guidance for October that Falih announced last month. Falih also said in October that November output would hit 11 million bpd. Sources told Bloomberg News this week the Saudis are currently pumping a record 10.8 million to 10.9 million bpd. Falih on Thursday said demand will be lower in January and the kingdom will respond to weaker consumption. The minister has already warned Saudi oil shipments will fall by 500,000 bpd in December. Falih pinned the anticipated drop in demand on the Trump administration allowing some of Iran's biggest customers to continue buying that nation's crude despite U.S. sanctions on the Islamic Republic. Saudi Arabia and other producers increased output earlier this year in anticipation of the sanction's renewal, but the waivers mean fewer Iranian barrels came off the market than expected. Meanwhile, U.S. crude production has reached 11.7 million bpd, according to preliminary weekly figures. Russia has also been producing at post-Soviet-era highs above 11 million bpd in recent months. The downtrend in oil prices has most definitely taken "some by surprise," Tamas Varga, senior analyst at PVM Oil Associates, said in a research note published Friday. "The question is … How much longer (are) bears are able to keep firing?" Varga wrote. Global oil supply has surged in 2018, with the International Energy Agency recently predicting non-OPEC output alone would climb by 2.3 million bpd this year. That is an increase of half a million bpd from the group's forecast six months ago. Meanwhile, the IEA expects demand in 2019 to grow at a rate of 1.3 million bpd, down slightly from a forecast of 1.5 million bpd six months ago. Analysts at Morgan Stanley believe there are "compelling arguments" on either side when it comes to the OPEC alliance considering whether to implement production cuts from Dec. 6. However, on balance, analysts at the firm said in a research note published Friday that the chance of supply cuts were around "2-in-3." "In that scenario, Brent prices likely recover back into the $70s … On the other hand, in the 1-in-3 probability that OPEC does not come to an agreement, there is still downside to Brent prices, although probably not much below the high-$50s in the next few months." Supply cuts also put the OPEC and non-OPEC alliance on a potential collision course with the United States. President Donald Trump is publicly in favor of low fuel prices and has urged the group not to reduce crude production next month. A day after standing by Crown Prince Mohammed bin Salman in the face of allegations that he had ordered the killing of dissident journalist Jamal Khashoggi, Trump on Wednesday publicly thanked Riyadh for helping to keep a lid on oil prices. But Trump also called on the de facto leader of OPEC to push prices even lower over the coming months. About two dozen exporting nations began capping their output in 2017 in a bid to drain a global crude glut. The group relaxed this strategy in June, but in September, some of the world's leading oil producers were talking about pumping extra oil onto the market in order to help soothe intensifying supply shock fears.

Oil and Gas Analysis

- **Rotary Rig Count Summary**

Location	Date	Week	+/-	Week Ago	+/-	Year Ago
United States	16-Nov-18	1082	1	1081	167	915
	21-Nov-18	1079	-3	1082	156	923
North Dakota	16-Nov-18	55	0	55	9	46
	21-Nov-18	52	-3	55	6	46
Canada	16-Nov-18	197	1	196	-11	208
	21-Nov-18	204	7	197	-11	215
International	Oct-18	1017	13	1004	66	951

  - **Baker Hughes**

- **Weekly Petroleum Status Report**

Stocks (Million Barrels)			
	Four Weeks Ending		
	11/16/2018	**11/9/2018**	**11/17/2017**
Crude Oil (Excluding SPR)	446.9	442.1	457.1
Motor Gasoline	225.3	226.6	210.5
Distillate Fuel Oil	119.2	119.3	125.0
All Other Oils	460.4	464.1	467.1
Crude Oil in SPR	652.6	653.3	667.5
Total	1,904.4	1,905.4	1,927.2

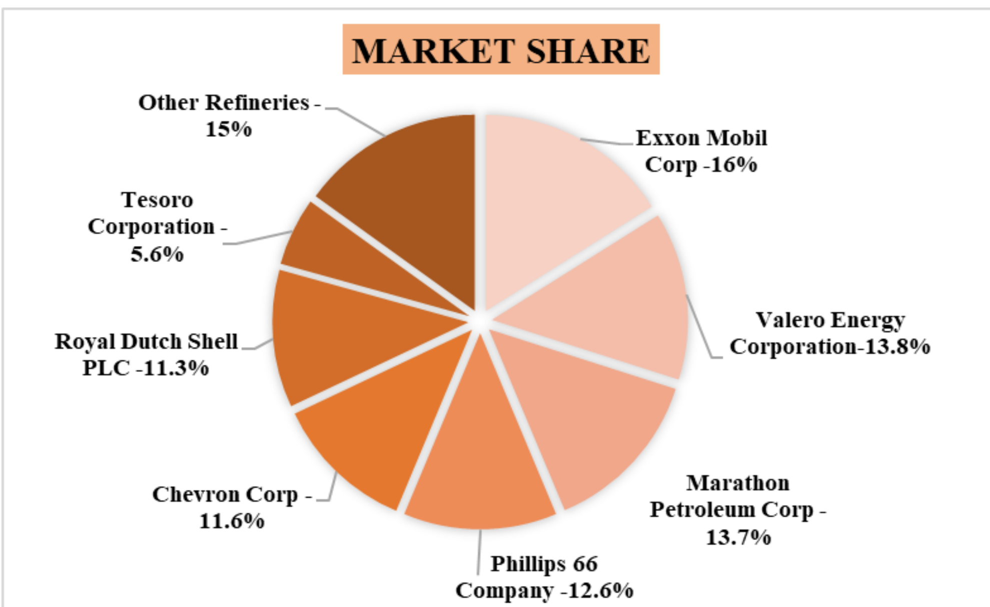
Products Supplied (Thousand Barrels per Day)			
	Four Weeks Ending		
	11/16/2018	**11/9/2018**	**11/17/2017**
Motor Gasoline	9,185	9,219	9,431
Distillate Fuel Oil	4,412	4,346	4,027
All Other Products	7,662	7,751	6,425
Total	21,259	21,315	19,882

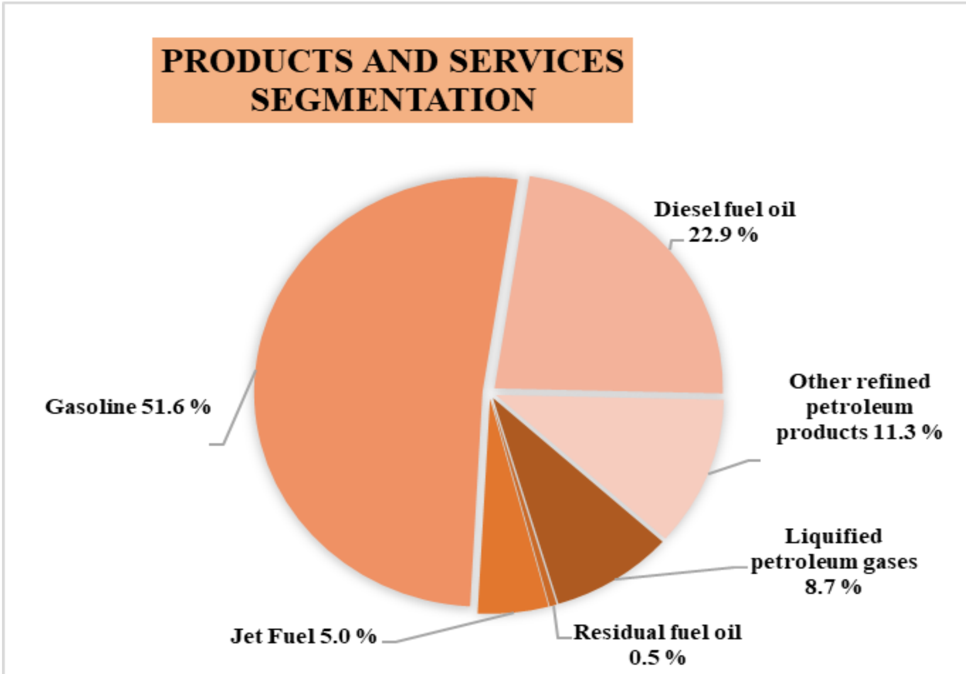
Refinery Activity (Thousand Barrels per Day)			
	Four Weeks Ending		
	11/16/2018	11/9/2018	11/17/2017
Crude Oil Input to Refineries	16,528	16,381	16,449
Refinery Capacity Utilization	90.6	89.7	90.0
Motor Gasoline Production	10,042	10,040	10,160
Distillate Fuel Oil Production	5,035	4,975	5,200

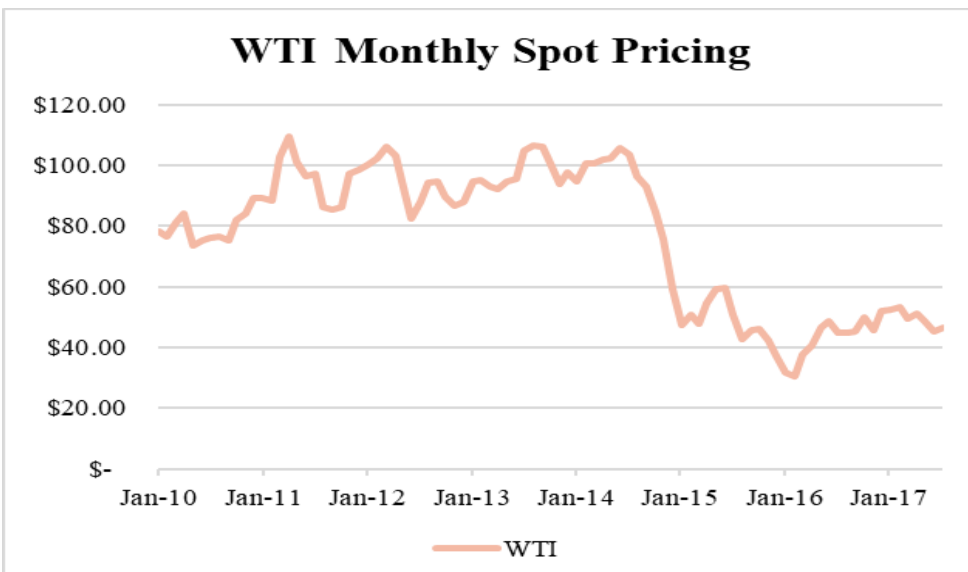
Net Imports (Thousand Barrels per Day)			
	Four Weeks Ending		
	11/16/2018	11/9/2018	11/17/2017
Crude Oil	5,245	5,223	6,249
Petroleum Products	-3,204	-3,273	-3,182
Total	2,041	1,951	3,067

- **EIA**

- **US Petroleum Refining at a Glance**




PRODUCTS AND SERVICES SEGMENTATION
Diesel fuel oil 22.9 %
Other refined petroleum products 11.3 %
Liquified petroleum gases 8.7 %
Residual fuel oil 0.5 %
Jet Fuel 5.0 %
Gasoline 51.6 %


WTI Monthly Spot Pricing
$120.00
$100.00
$80.00
$60.00
$40.00
$20.00
$-
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
Jan-17
WTI

- **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-behavioryuuui