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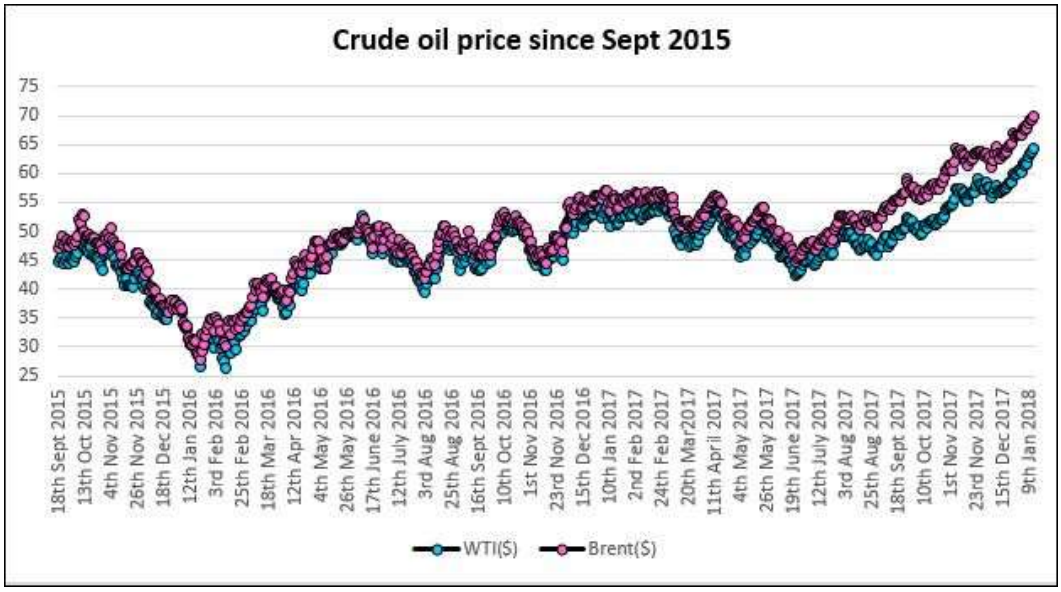

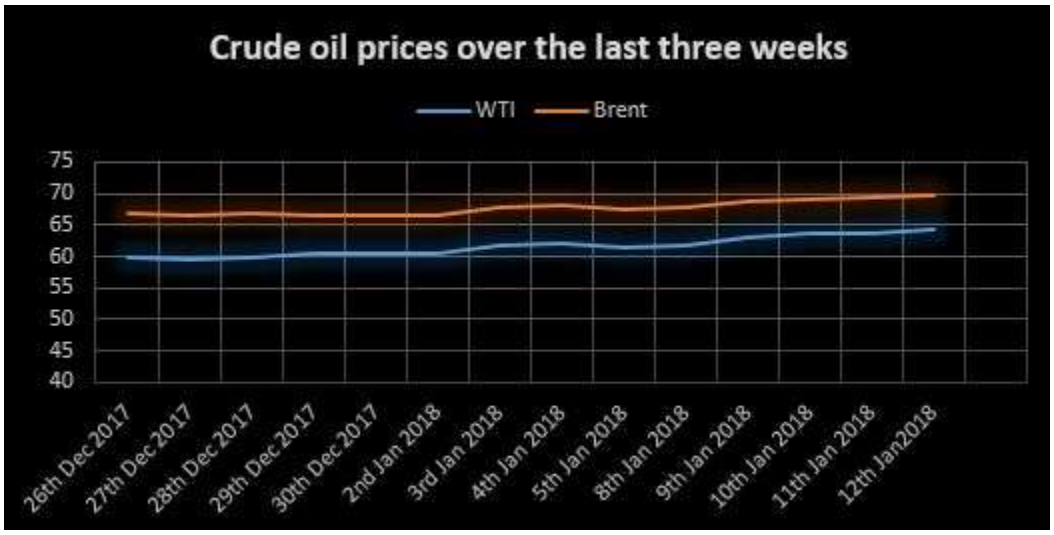

- There has been an increasing trend in the price of oil this week, mainly due to the OPEC production cuts, growing demand and the geopolitical situation. The price has also risen because the US stockpiles shrunk again for the eighth week, by 3.75 mb last week.
- Supply disruption could take place in view of the situation in Venezuela where food shortages and the worsening inflation has led to social unrest. The oil industry in that country is in bad shape with the production gradually falling. Iran pumped 3.8 mb/d in December (Bloomberg), and any US sanctions could disrupt that. Iraq has been fighting insurgents in the country, and its dispute with the Kurdish region is reducing its exports from that area. There have been supply

disruptions in Libya and Nigeria. President Trump has been pursuing sanctions on Iran and North Korea, and it is going to have consequences.

- Will Russia go with OPEC and continue with the production cuts that have been announced till the end of this year. Rosneft and Lukeoil, the big oil companies in the country have cautioned that if the production cuts go for too long, Russia could lose market share. OPEC members are also concerned as there is apprehension that shale oil will again flood the market if the price of the barrel goes too much above $60, as it has reached $64 this week.
- The production in Kazakhstan has been increasing over the past year as its giant Kashagan oilfield has been ramping up its output. Even though Kazakhstan is a signatory to the OPEC agreement, but its production output was 130,000 b/d above its OPEC target in November and December.
- As per the EIA, the US oil production is likely to reach 10 mb/d as early as February 2018, and 11 mb/d in November 2019. Overall, a price above $55 a barrel will make it to this figure, and the Permian production and Mid-Continent has been booming.
- Over the last several months it is being said that the tight oil drillers are doing more with less. How do we explain this? The number of rigs operating now is less than half of what they were in the middle of 2014 when the downturn started. The production now is higher. Over the last 3 to 4 years, the introduction of faster horizontal rigs and more intense fracing has enabled production to dramatically increase, even as the number of rigs drops. Similarly, a 7,500-ft. average lateral length of a horizontal well is 50% more than what was the norm 3 years ago.

So much for the industry news this week.

Did you know?

The phrase **'*sweet spot*'** has become a buzz word in our industry? We are all looking for sweet spots in our subsurface reservoirs.

The term essentially refers to an area that is flanked by less favourable conditions or parameters. The origin of this phrase is probably from sports, where references is made to an area of a bot or a racket, where if contact is made with a ball, it travels further or faster than when it touches any other part. This holds when reference is made to a tennis or squash racket or a baseball or a cricket bat, or even a golf club. Thus, the reference is to a small area, where during the short time that the bat or racket strikes the ball, the former imparts very high velocity to the latter. These parameters define the impulse of the force with which the ball shoots out after the impact. There are probably other factors at play here, e.g. the material of the bat, or the gut on the racket, as well as the favourable geometrical area. With this interesting origin, the phrase found reference, or rather proliferated to other trades and commercial applications. In most of these applications, sweet spot refers to maximization of the inherent parameters for the most favourable outcome. For example, in economics, a certain level of interest rates is referred to as a sweet spot, when it stimulates economic growth without enhancing inflation. Maximization of understandability and ambiguity in an analysis is a reference to its sweet spot.

Similarly, the right combination of technology, affordability, safety and comfort is a good recipe for a sweet spot for a car maker.

Coming to the oil and gas industry, the term ‘sweet’ originated from the fact that a low level of Sulphur in oil gives it a sweet taste and a pleasant smell. Also, low-sulphur crude is easily processed into gasoline, and light sweet oil is the most sought after, commanding a higher price due to the large fraction of components that are directly processed into gasoline. Gradually, this usage got borrowed for reference to locations within a reservoir or a play that hold the maximum production potential. These days the phrase sweet spot is commonly used to refer to pockets in marine shale formations that are organically-rich, brittle and thick. They are mapped using geophysical, geological, well-log data as well as core data. Determination of sweet spots are helping oil and gas companies to target them on priority through drilling.

I hope you find this information interesting. So much for this post!

Till the next post, stay safe and happy!