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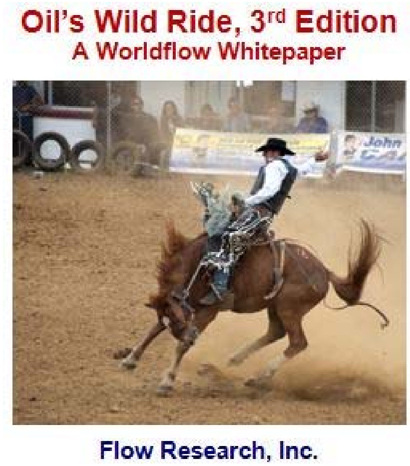


Worldflow *Flash Report*

Both WTI and Brent Crude Oil Set New Five-Month Highs on the Same Day

Wakefield, Massachusetts (April 5, 2019) — The price of West Texas Intermediate (WTI) crude oil closed at $63.11 per barrel Friday, April 5, the highest closing price since November 5, 2018, when it closed at $63.12. Brent crude oil also set a record, settling at $70.34 per barrel on April 5, its first close over $70 per barrel in five months. Brent oil typically trades $5 to $7 higher than WTI. Prices are expected to stay in a similar price range for most of the year.

WTI is traded on the New York Mercantile Exchange (NYMEX) and is composed mainly of oil drilled in the United States from fields in Texas, North Dakota, and Louisiana. WTI is transported to Cushing, Oklahoma, where it is stored. About 90 million barrels of oil are stored in Cushing, Oklahoma. WTI is considered a benchmark for U.S. oil prices.

Brent crude oil is extracted from oil fields in the North Sea. Brent is mainly extracted from four oil fields in the North Sea. While it is considered to be both light and sweet, it is slightly heavier than WTI. Brent futures are traded on the ICE Futures Europe in London. The price of Brent crude is a benchmark for oil produced in the North Sea and sold in Europe, Africa, Australia, and some Asian countries.

Some analysts attributed oil's record-setting performance on April 5, 2019, to a strong US employment report, at least temporarily dispelling fears of a global slowdown. However, there are more fundamental forces at work underpinning this market. Supply cuts led by OPEC, combined with U.S. sanctions against Iran and Venezuela, are credited with tightening global inventories and causing crude prices to jump by about a third since the beginning of 2019. At its 175th meeting in Vienna, Austria, on December 6, 2018, the Organization of Petroleum

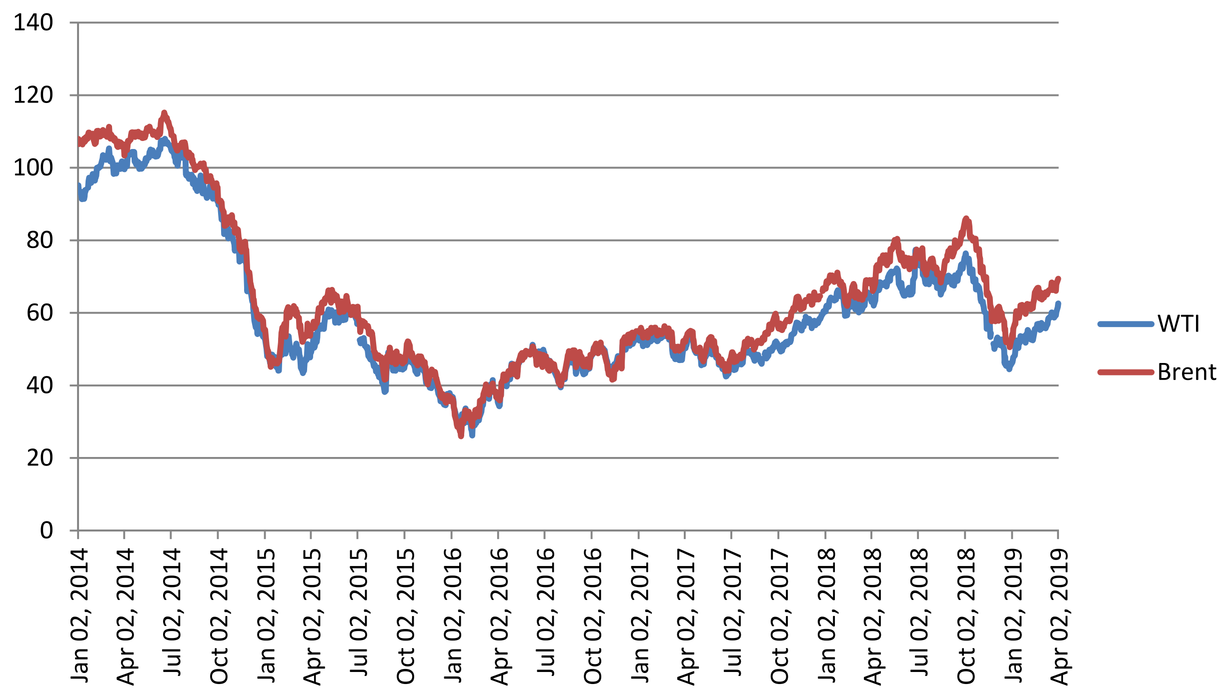
Exporting Countries (OPEC), together with Russia, agreed to cut crude oil production by 1.2 million barrels per day. Prices began climbing at the beginning of 2019.

We believe this is good news for the oil & gas industry, as well as for flowmeter and instrumentation manufacturers who support it. The rise and stabilization in the price of crude oil since early 2017 has caused a tremendous increase in the amount of oil and gas exploration and production activity worldwide. It is again profitable to drill in many locations where it had not been economical, and closed wells have now been re-opened to production. Shale drilling and petrochemical plant construction have also increased worldwide. The recent highs show the oil market is headed upward, and supply and demand considerations suggest that it is unlikely to retreat to pre-2017 levels anytime soon.

Oil Prices Since 2011

The per-barrel price of WTI crude oil remained mostly between $80 and $100 from January 3, 2011, until August 2014. Beginning in August 2014, oil prices began to decline steadily from the $100 level. This decline continued down to less than $30 per barrel in February 2016. While some of the price fluctuations were due to the Arab Spring uprising, to Louisiana hurricanes, and to other events that temporarily affected oil prices, the main driving force behind this decline was supply and demand. When world oil supply exceeds demand, prices typically decline. When oil demand exceeds supply, oil prices tend to rise.

WTI and Brent Oil Prices from 2014 to 2019 ***(dollars per barrel)***



The real story behind these trends in oil prices is the balance between OPEC cuts and the decline in Venezuelan production as compared to the increase in US production due to increased shale drilling. It has been the high US production over the past two years that has kept oil prices at a somewhat subdued level. But this may be changing. According to EIA (Energy Information

Administration) data released on March 29, US production declined by about 90,000 barrels per day in January 2019 compared to December 2018. On the demand side, despite some speculation about a global slowdown towards the end of 2019, economic projections for global growth in 2019 remain in the 3.0 percent range. Global expansion is driven by population increases, greater industrialization, expanding Asian economies, and technological advances like the increase in liquefied natural gas (LNG) exports. While both economic growth and oil prices are moving targets, chronicling them accurately is vital to sound long-term planning.

What Lies Ahead

The EIA predicts WTI crude oil prices will average $54/b in the first half of 2019 due to U.S. oversupply before gradually rising to an average of $59 in the fourth quarter of 2019 and throughout 2020 as U.S. supply stabilizes, according to the March Short-term Energy Outlook. Other analysts are projecting that WTI will average between $60 and $65 throughout much of 2019. Whether prices remain strong through the end of 2019 depends on macroeconomic factors. Even if, in the negative macroeconomic case, oil prices decline slightly at the end of 2019 or the beginning of 2020, the supply/demand balance and underlying growth factors indicate that prices will rebound in 2020.

A pumpjack at an oil well near Houston, Texas (Photo by Flow Research)

The EIA forecasts that Brent spot prices will average $63 per barrel in 2019 and $62 per barrel in 2020, compared with an average of $71 per barrel in 2018.

The EIA projects that production of U.S. crude oil will continue to grow through 2030, and then level off at 14.0 million barrels per day through 2040. This is the Reference Case described in its Annual Energy Outlook 2019. The Reference Case assumes that the current laws and regulations that affect the energy industry remain in effect during this period. Growth factors include continued development of onshore tight oil in the Lower 48, significant deepwater discoveries in the Gulf of Mexico, and increases in Alaska crude oil production.

What It Means

The current trend in oil prices is very good news for flowmeter and instrumentation suppliers. As Flow Research projected in our February 2018 Flash Report on Oil Prices, 2018 was a banner year for the flowmeter market. This is verified by our year-long research on the 2018 flowmeter market, culminating with the publication of *Volume X: The World Market for Flowmeters, 7th Edition* (www.flowvolumex.com). Large projects made a comeback, oil prices rebounded, and global economic activity strengthened. These growth factors can be expected to continue through much of 2019. This should especially favor new-technology meters such as Coriolis, ultrasonic, and magnetic flowmeters. It is also good news for suppliers of multiphase and watercut meters, as exploration and production activity increases. We are also likely to see more growth in subsea projects. Stay tuned to Flow Research as we continue to follow these exciting developments.

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This Flash Report is part of Flow Research's Worldflow Monitoring Service. For more information on Flow Research's Worldflow Flash Reports, White Papers, and the Worldflow Monitoring Service, go to www.worldflow.com.

For more details on oil prices and their underlying causes from 2014 to the present, read our White Paper, **Oil's Wild Ride, 3rd Edition**. This White Paper also explains the origin and membership of OPEC and compares its role to that of the Organization for Economic Cooperation and Development (OECD). Contact Flow Research for details on receiving a copy of this White Paper.

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