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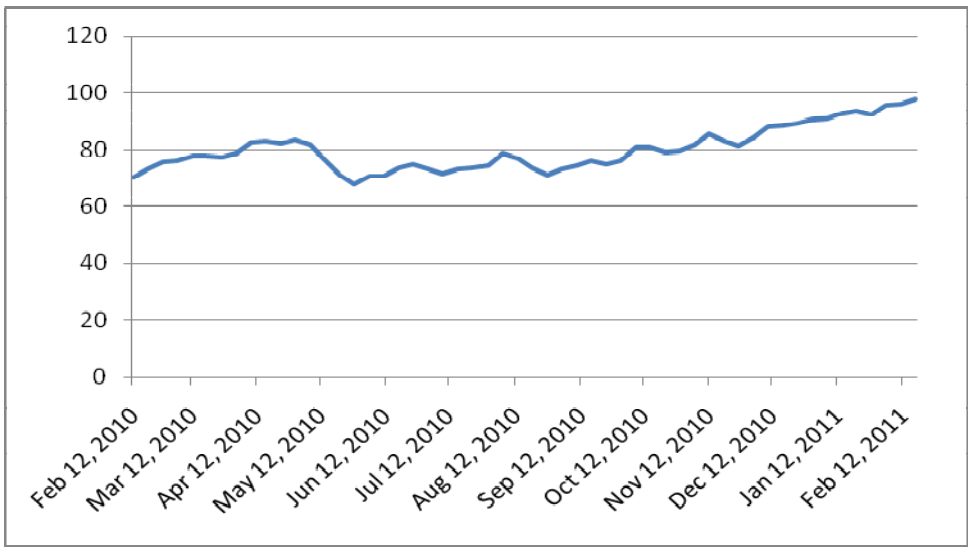
Worldflow *Flash Report*

Crude Oil Spikes to Exceed $100 per Barrel on Mideast Unrest

February 24, 2011 (Wakefield, MA) – The price of crude oil surged to over $100 a barrel today as unrest in the Middle East and northern Africa continued. The most immediate cause for the spike in oil prices was diminished production from Libya.

The last time we published a Flash Report on oil prices, in May 2010, the news was that oil prices were holding in the $80 range. The news this time is much more dramatic, with oil prices exceeding $100 for the first time since October 2, 2008. Energy demand is increasing along with the improving economy, and this increasing demand is helping to push prices higher. But the main driver of the current spike in oil prices unrest is the Middle East and Northern Africa, including Egypt, Bahrain, Algeria, Tunisia, Iran, and especially Libya.

Price in dollars per barrel of West Texas Intermediate (WTI) Crude Oil -- Cushing, OK: Feb. 12, 2010 to Feb. 18, 2011



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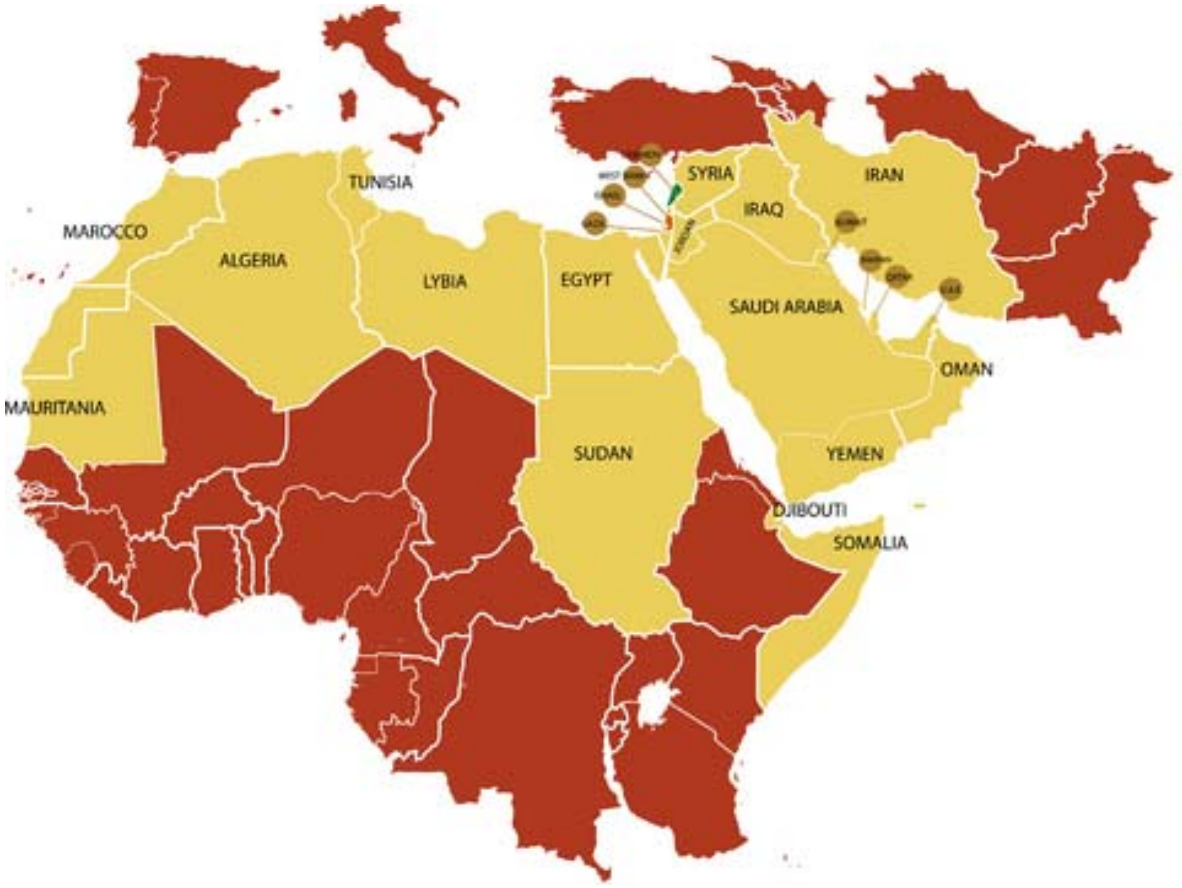
Oil prices peaked in the range of $140 per barrel in mid-July 2008. They then went into a steep decline, bottoming out at less than $40 per barrel in December 2008. Oil prices increased to more than $60 per barrel in June 2009. From October 2009 until March 2010, prices fluctuated between $70 and $80 per barrel. Finally, beginning on March 3, 2010, oil prices closed above $80 per barrel. Since that time, oil prices have been creeping up past $90 per barrel. It was the one-two punch of events in Egypt and Libya that pushed prices over $100 per barrel.

Now the crisis in Libya puts things in clearer perspective. Oil prices have spiked to more than $100 a barrel, and the instability in Libya and some other countries in the region is continuing. While the crisis in Egypt caused prices to rise by about $3 a barrel, there are some important differences between Egypt and Libya.



In 2010, Egypt's oil production averaged 660,000 barrels per day. Libya has more proved oil reserves than any country in Africa, at 41.4 billion barrels, and produces 1.88 million barrels per day. The amount of oil produced by Libya is roughly equal to that produced by the Gulf of Mexico. So Libya produces close to three times as much oil as Egypt. As of now, daily output is reduced by from 1/3 to 1/2. In addition, Libyan oil is light sweet crude, the most desirable type.

West Texas Intermediate (WTI) vs. Brent Crude Oil

While there are many types of oils and oil contracts, two of the most widely followed oils are WTI and Brent. WTI is typically refined in the West Coast and Gulf regions of the United States, and is centered in Cushing, Oklahoma. It is lower in sulfur than Brent, with a sulfur content of about 0.24%, while Brent's sulfur content is about 0.37%, and both oils are classified as sweet crude. By contrast, oil from Venezuela has a sulfur content of about 4.5%. Brent is a combination of 15 crude oils located in the North Sea.

Historically, WTI has traded at a slightly higher price than Brent, mainly because it is easier to refine. Lately, however, Brent has at times traded at close to $20 more than WTI. The reason has to do with the origin and destination of oils. Because much of the oil from the Middle East goes to Europe, oil shortages in the Middle East have a more pronounced effect on Brent than on WTI. In particular, the unrest in Egypt caused Brent crude to surge to over $100 per barrel. The unrest in Libya pushed Brent crude prices to almost $120 per barrel.

The Saudi Effect

Some people say "It doesn't matter about Libya, because Saudi Arabia can make up the difference." Well, yes and no. Saudi Arabia has the capability to increase production to offset the diminished production in Libya, assuming they choose to do so, but theirs is not so much the light sweet crude as the heavy, sour crude (like what is produced by Venezuela). So we're not really comparing apples to apples but apples and oranges. Libya's light sweet crude is not so easy to replace.

There is no doubt that a wave of democratization is sweeping through the Middle East and northern Africa, and this wave will not be so easy to stop. The countries that are most immune to radical change at this point are Saudi Arabia, the United Arab Emirates (UAE), and Oman. The reason is that even though these countries are monarchies or a federation as is the UAE, these governments do a lot for their people, including giving them cash grants, so discontent is much lower there. It is in the countries with military dictatorships like Libya and Iran and little freedom where change is more likely to occur.

What it Means: the "Orifice Plate Effect" at Work

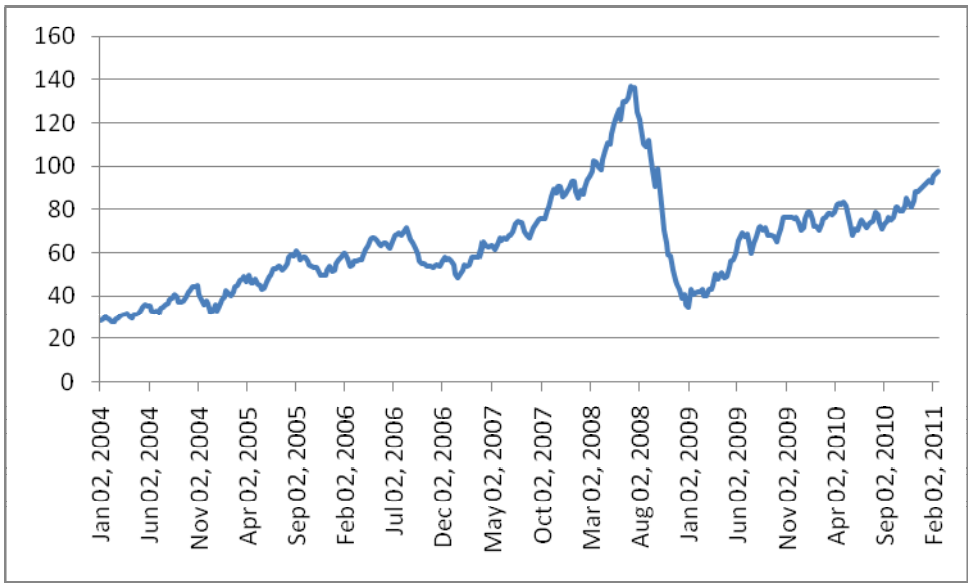
In January 2008, Flow Research published a White Paper on Oil Production in which we advanced what we called the "Orifice Plate Effect" of events on oil prices. The idea is a simple one. The price of oil is basically a question of the balance of supply and demand. If there is a reduction in supply from a major source, this acts as a constriction on supply, somewhat like an orifice plate constricts flow by placing a barrier to the flow in the line.

Flow Research has been predicting higher oil prices for the past four years, and we have a string of flash reports, white papers, and articles on this subject. Well, high prices are here again and this time no one is saying that prices are being driven up by futures contracts and speculation. This is fundamental supply and demand at work.

There are multiple scenarios that could play out in the Middle East. The Libyan situation could be resolved somewhat like the crisis in Egypt, and the other "hot spots" such as Tunisia, Algeria, Bahrain, Iran, and Iraq could quiet down or become subdued. This is a possible but not very likely scenario. Another possibility is that the situation in Libya could become a protracted struggle, and the oil supply from there could be cut off. Already Total SA of France is closing down its Libyan operations, and OMV AG of Austria is suspending its operations there. This scenario would almost certainly push oil prices even higher. Even if oil prices retreat to the $90 range for the short-term, it is likely that the long-term trend is toward higher prices.

For years we have been advising instrumentation suppliers to focus on the energy industry -- and started the "Energy Monitor" in 2005 to provide instrumentation suppliers and end-users with detailed information about this industry. Yes, renewables are important, and natural gas is a long-term bridge to renewables, but for now, $90 to $100 oil means companies will pay higher prices for highly accurate instrumentation to measure it. It means even more of a boon for custody transfer applications, and should give a major boost to multiphase flowmeters as well. New-technology flowmeters, especially ultrasonic and Coriolis, should benefit from this trend.

Price in dollars per barrel of West Texas Intermediate (WTI) Crude Oil Cushing, OK: January 2004 to February 2011



Source: Energy Information Administration (EIA)

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