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For Production Cuts, Oil Market Looks to OPEC, but OPEC looks toward US Shale

By Robert McNally

INTRODUCTION

As Brent oil prices grind to four-year lows below $90 per barrel amid faltering economic growth, market participants are beginning to wonder when the Organization of the Petroleum Exporting Countries (OPEC) will step in and cut production in an attempt to halt further slippage. Many in the oil market assume OPEC has little choice but to act to prevent lower prices that threaten their budget stability, a level that varies by country but for Saudi Arabia is estimated to be around $85-90 per barrel. However, OPEC leader Saudi Arabia, along with Kuwait and UAE, has recently signaled it is in no hurry to lower production levels to support prices,[1] with one Saudi official implying any cuts needed to balance the market must be shouldered by US producers. The oil price drop and stand-back Saudi posture thus raises key questions: What price level would be required to extract supply cuts from US producers? And how would this affect the US shale oil boom, which has been a cornerstone of the nation's economic growth in recent years?

If US oil companies are asked to play the "swing producer" role, it will not be the first time. Officials at the Texas Railroad Commission ordered supply changes for many decades, from before World War Two until 1972, to prevent damaging price swings and offset supply disruptions, such as during the Arab-Israeli conflicts that disrupted global supplies in 1956 and 1967. At present, however, if OPEC looks to the US to reprise its swing producer role, the operating driver will be price not government fiat. Depending partly on how much supply must be reduced to balance the market, the process of "sweating out" cuts from US exploration and production companies could prove to be a demanding challenge for smaller independents working on limited acreage and overstretched capital. Moreover, "success" might raise concerns about the longer-term health of the US shale or light tight oil (LTO) boom and renew debate on policy implications such as crude oil exports.

"SWING PRODUCER" SAUDI ARABIA EYES US SHALE PRODUCERS AS PRICES FALL

The recent oil price dip into the $80 a barrel range differs from the temporary and quickly reversible declines seen in 2012 and 2013. The main difference is sharply and broadly deteriorating GDP growth outside the United States, which combined with the sustained US supply boom and the return of Libyan production to oil markets, is starting to put strong downward pressure on prices. While shrugging off concerns about sustained weak prices, OPEC leader Saudi Arabia – which for decades has traditionally played the role of swing producer to balance markets – has dropped hints that any supply cuts that might be needed to rebalance the market should come from US producers instead of OPEC or Saudi Arabia. Saudi Oil Ministry spokesman Ibrahim al-Muhanna recently said, "the high cost of producing shale oil has put a floor under oil prices… It means the price of oil will not go to less than $90, and even if it goes below that for whatever reasons, it would be for a short time before going back to the level of around $110."[2]

In saying US shale oil puts a floor under prices, al-Muhanna is referring to the fact that compared with conventional oil, LTO production is more responsive to prices for two reasons. First, production costs are high due to the capi-

tal-intensive nature of hydraulic fracturing (fracking) and horizontal drilling. Second, initial decline rates for shale oil are much steeper than those normally seen in conventional oil wells. This means as falling prices trigger slowdowns in new US shale oil drilling, overall production would drop off faster than would be expected from other producers. As the International Energy Agency's (IEA) 2013 World Energy Outlook noted, "large initial natural decline rates make LTO production potentially much more responsive to fluctuations in oil prices than conventional fields: a decision to stop drilling translates into a rapid fall in output" (emphasis added). The IEA estimated LTO production would fall by 30% per year for three years if investment in new drilling halted.

US SUPPLY COULD SNAP BACK WHEN OIL PRICES INCREASE

The relative elasticity of LTO supply works both ways: When oil prices rise above threshold economic levels, LTO drilling is likely to resume. After curtailing investment in drilling or even shutting in wells, which effectively creates "spare capacity" in the Bakken, Eagle Ford, and Permian, producers could return to drilling in months assuming drillers decide to obtain and deploy the necessary capital. However, any new US "spare capacity" is likely to take longer to create compared with Saudi Arabia's. (The standard definition of spare capacity is new supply that is available in thirty days and sustainable for three months.)

And LTO production is unlikely to be able to surge like Saudi Arabia's in the event of a major geopolitical disruption. If LTO producers are already maxed out and a disruption occurs, they could not procure extra rigs, workers, or transportation options to surge production significantly. And even if they could, LTO producers may not want to, given the possibility for the disruption to produce a large "round trip" price spike and reversal. This is why Saudi Arabia's Muhanna believes that while US shale oil will put a floor under prices it cannot fully replace Saudi Arabia as a swing producer in the event of a disruption, when only Saudi Arabia's 1.5 – 2.0 million b/d of spare capacity would be available on short notice.

WOULD SAUDI ARABIA REALLY BE WILLING TO LET OIL PRICES TUMBLE?

Of course, officials in Riyadh are weighing a number of factors. They have expressed optimism that crude oil prices would recover this winter and the selloff so far, while sharp, has been relatively short. Supply risks still exist, Libyan output could falter, the situation in Iraq could deteriorate further, and sanctions against Iran could be ratcheted up. On the other hand, Riyadh may well be underestimating the depth and duration of a price drop and if so could reconsider its on-hold posture.

Some outside observers may contend Saudi Arabia cannot afford to allow oil prices to drop precipitously for fear of losing revenue needed to finance expansive domestic spending essential for the maintenance of political stability. But Saudi officials have expressed confidence they could ride out any price weakness by relying on fiscal and monetary stimulus. A back-of-the envelope calculation indicates Riyadh would earn about $15 billion less over a year were it to keep its crude exports at current levels of roughly 7.0 million barrels per day (b/d) and let oil prices slide to $80 a barrel compared with cutting exports to 6.0 million b/d in order to maintain a $100 a barrel floor price.

That accounts for about 2% of Saudi Arabia's $746 billion foreign exchange[3] treasure chest. Riyadh would certainly not enjoy sacrificing that revenue short term, but it is better positioned to endure the revenue compression than some of its rivals like Iran, whose $130 a barrel fiscal breakeven price is well above Riyadh's.

IF OPEC BALKS AND PRICES KEEP DROPPING, EXPECT FORCED SUPPLY REDUCTION FROM UNHEDGED, SMALLER SHALE PRODUCERS

If oversupply and OPEC inaction persist, focus will increasingly shift to which producers outside OPEC will be forced to reduce supply. Current and expected oil prices are a major factor in companies' decisions to undertake new projects and even continue current drilling. High cost oil supply includes not only US shale oil. IEA estimated that roughly 2.6 million b/d of global crude supplies of 93 million b/d comes from

projects sprinkled around the globe with a breakeven cost above $80 per barrel. In particular, Canadian synthetic crude (syncrude) and deepwater projects carry high breakeven costs and are usually considered to be the most vulnerable to a sustained price decline. However, if syncrude and offshore rig investors have already sunk capital into upgraders and offshore platforms, they will not shut down current production quickly, especially if any price dip is expected to be short lived. They may put new projects on ice for a while, but they won't turn off the spigot quickly as their marginal operating costs are considerably lower than average project costs, which includes capital expenditures that have already been sunk.

Therefore, the burden of at least initial cuts is most likely to fall on US shale oil producers where production is more sensitive to the pace of new drilling. As noted previously, this is more responsive to price declines compared with other high cost projects.

That said, shale producers will resist ramping down activity as much as possible. Initially, and in the face of what may be viewed as temporary and minor oversupply, many shale oil producers are likely to face pressure from Wall Street to not surrender leases, crews, and rigs. They will likely regard themselves as relatively efficient and low cost, and wait for someone else to surrender market share, especially if they are hedged short term. The most vulnerable producers are small, un-hedged, and highly reserve-base levered, vertical well drillers for whom a drop into the mid-$80s would shut down access to capital and thereby their ability to keep drilling. However, the amount of such "vulnerable" US production is uncertain, as is the amount of future supply cuts that would be needed to balance the market while keeping prices stable. OPEC currently forecasts requirements for its crude will fall by 1.0 million b/d next year relative to current production of 30 million b/d. If OPEC refuses to make those cuts and instead looks to the US shale sector (and perhaps some Canadian companies) to do so, it is uncertain how far prices would fall, but very likely it would be lower than today's $85 Brent level ($82 WTI). Oslo-based Rystad Energy estimates that Brent prices would have to fall to $50 a barrel for a full year to reduce US production by 500,000 b/d, a level that would strain the coffers of any of the major oil exporting nations.[4]

IMPLICATIONS

• OPEC's next meeting on November 27 may be more consequential than recent ones have been. If prices keep falling precipitously, Riyadh may reconsider its on-hold stance. In any case, OPEC could verbally intervene by expressing concern about price weakness or even lowering its current 30 million b/d target. In the event of inaction from OPEC, sweating cuts from US exploration and production companies is likely to take longer and require lower prices than if OPEC were to lead.

• A weak global market and Saudi Arabia's apparent unwillingness thus far to play the swing supplier role implies the US oil production expansion, the largest if not only significant positive economic development in recent years, may come under threat. As the Obama administration has noted,[5] "[r]ising domestic energy production has made a significant contribution to GDP growth and job creation. The increases in oil and natural gas production alone contributed more than 0.2 percentage point to real GDP growth in both 2012 and 2013, and employment in these sectors increased by 133,000 between 2010 and 2013. […] These figures do not account for all the economic spillovers, so the overall impact on the economy of this growth in oil and gas production is even greater." Of course, the flip side to this is that lower fuel prices provide a boost to the wider economy and can increase consumer spending. Deutsche Bank estimates that when pump prices decline by a penny, it cuts a billion dollars off consumer energy costs.[6]

• As shale oil producers come under pressure to reduce drilling, they would likely redouble efforts to remove the decades old ban on crude oil exports. In addition to the level of international oil prices, the spread between US crude oil prices and international prices is critical to prospects for continued US shale oil production. While the spread between US and global crude oil prices is currently narrow, it was much wider just nine months ago and is projected to widen significantly in coming years, partly due to the export ban. Ending the ban and allowing shale producers to capture global prices would remove an additional risk they face, minimizing their vulnerability to price declines on the margin, shifting the burden of supply cuts onto other high-cost, capital intensive producers like Canada and Venezuela.

NOTES

[1] Ron Bousso and Joshua Schneyer, "Exclusive: Privately, Saudis tell oil market- get used to lower prices," Reuters, Oct. 13, 2014, http://www.reuters.com/article/2014/10/13/us-oil-saudi-policy-idUSKCN0I201Y20141013.

[2] Margaret McQuaile, "Saudis say oil won't fall below $90/b because of shale costs," Platts, Sept. 30, 2014.

[3] Saudi Arabian Monetary Agency, August 2014, http://www.sama.gov.sa/sites/samaen/Dep/ResearchDep/MonthlyStatisticsReportLib/5600_S_Monthly_Bulletin_AREN.pdf.

[4] Dan Murtaugh and Jing Cao, "US shale output seen growing even as prices drop," Bloomberg News, Oct. 14, 2014, http://www.bloomberg.com/news/2014-10-14/u-s-shale-oil-output-growing-even-as-prices-drop-eia.html

[5] Council on Economic Advisers, The All-of-the-Above Energy Strategy as a Path to Sustainable Economic Growth, May 29, 2014, http://www.whitehouse.gov/administration/eop/cea/factsheets-reports.

[6] Russel Gold, "Global Oil Glut Sends Prices Plunging," The Wall Street Journal, Oct. 14, 2014, http://online.wsj.com/articles/global-oil-glut-sends-prices-plunging-1413334648?mod=WSJ_hp_LEFTTopStories.

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