

Explaining the price plummet

Andy Lipow, founder of Lipow Oil Associates, looks at why oil prices are down, the consequences for the shale industry and the ultimate impact on the terminal sector

It's supply! It's demand! It's a price war! It's a recession! Oil prices plunge! These same words were spoken in 2008 and 2009 when oil prices dropped more than \$100 (£80) per barrel from over \$140 per barrel to less than \$40 per barrel. Crude oil prices went into the steepest contango ever seen, reaching over \$6 in the front two months benefitting anyone with crude oil storage. Is history repeating itself?

The recent oil price decline

The rapid decline in oil prices is the result of a confluence of factors. Global oil demand continues to grow. According to its November Oil Market Report, the International Energy Agency (IEA), oil demand of 91.8 million barrels per day in 2013 is expected to grow by 680,000 barrels per day (bpd) in 2014 and another 1.1 million bpd in 2015 to 93.6 million barrels per day. The forecast increases in demand have been generally revised downward over the last several months as economies in the EU, and Japan struggle to expand while the Chinese economy experiences slower growth.

On the other hand, the higher price environment of the last several years combined with improvements in technology and efficiency has led to the now well known oil shale revolution in the US. The Energy Information Administration (EIA) reported that US oil production in 2013 was 7.4 million bpd and expects that to rise to 8.5 million bpd in 2014, which is simply more than enough to meet the increase in world oil demand in 2014. Combine that increase with another 200,000 bpd from Canada, and the world looks flush with supply. However, the increase in oil production

was not necessarily a surprise, US rig counts and production figures are reported weekly and increases in Canadian oil production occur with long lead times. The wild card was supply disruptions that masked the effect of the looming supply increase.

Since the fall of Muammar Gaddafi in October 2011, Libyan oil production rates have been volatile. Libya had been production 1.6 million bpd before his death and according to the EIA, that rate fell to only 200,000 bpd by the end of 2013. If Libyan oil production had remained near zero throughout 2014, we would not be having this discussion. But it hasn't. Production rates, although volatile, have increased faster than the market expected and have increased to over 700,000 bpd. Depending on which Libyan lawmaker one listens to, oil production could increase to over one million bpd by the end of the year.

In early December 2014, the Kurdish Regional Government reached a revenue sharing deal with the Government of Iraq from oil sales. Not only does this remove the legal cloud arising from sales of oil produced in Kurdistan, it will allow Iraq to increase oil production and exports through the Kurdish oil pipeline network to Ceyhan, Turkey. Exports are expected to rise to 550,000 bpd in 2015.

The outlook for 2015

On 27 November 2014, OPEC ministers agreed to leave their production quota unchanged at 30.0 million bpd. The actual production has been fluctuating, but recently had been estimated at about 500,000 bpd over quota. While putting a brave face on the meeting



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outcome, the fact is that only Saudi Arabia, Kuwait, the United Arab Emirates and Qatar have enough financial reserves to mitigate the low price environment for several years. The balance of the membership requires oil prices in excess of roughly \$90 per barrel, with some needing well over \$125 to avoid running a deficit. As a result, the market expects no decline in OPEC production.

Meanwhile, oil production is expected to continue its increase in the US. The EIA's October Short Term Energy Outlook forecasts another 1 million bpd increase in 2015, but it is my opinion that the forecast will be revised downward by a couple of hundred thousand bpd as new capital expenditures decline.

The oil shale revolution has almost obscured what is happening in the Gulf of Mexico, where investments of hundreds of millions of dollars over the last few years are now coming to fruition. For example, the Jack/St. Malo fields operated by Chevron were discovered in 2003 and 2004 and production began in December. Other large development projects such as the Tubular Bells, Lucius and Atlantis Phase 2 are also coming on line in 2014. The EIA forecasts that Gulf of Mexico production is expected to rise from 1.3 million bpd in 2013

to a record 1.6 million bpd in 2015. This growth is likely to continue in 2016 and 2017. The low oil price environment is not stopping deepwater Gulf of Mexico production, Chevron and Hess just announced that they will proceed with the Stampede platform and related fields, discovered as early as 2005 and now set for production in 2018.

What about shale?

Much speculation has occurred regarding the reasons behind OPEC's decision not to cut production. The reasons range from letting the market work and eventually get supply and demand back in balance to OPEC declaring a market share price war to reduce investment in oil shale to geopolitical conspiracies.

For all intents and purposes, the oil shale boom has occurred in two states: North Dakota in the Bakken Field and Texas in the Permian Basin of West Texas and the Eagle Ford of South Texas. If Texas were a member of OPEC, it would be the second largest producer at 3.25 million bpd: behind Saudi Arabia and ahead of Kuwait. North Dakota oil production is about 1.2 million bpd, greater than that of Algeria and approximately equal to that of Ecuador and Qatar combined.

There is no doubt that the

lower price environment will affect new capital investment. There is a wide range of oil prices that are quoted regarding the breakeven production costs of oil wells in these geographic areas. These estimates are based on, among other things, well cost, production profiles, and internal rates of return. Pick up any investment bank research report and one is likely to get a different cost.

In the North Dakota Bakken field, breakeven costs are estimated to range from \$60 to \$75 per barrel. In November the IEA said that most oil production there is profitable at or below \$42 per barrel. In the Permian Basin, breakeven prices are estimated between \$55 and \$75 while in the Eagle Ford breakeven production costs have been estimated to be between \$50 and \$65 per barrel.

The effect of low oil prices on future production may be seen through the actions of the exploration and production companies. The oil adage of don't ask a trader what they think, ask them what their position is may be applied to producers. Low oil prices are bad for their business.

Simply that is because not all oil wells are created equal. Rigs are being idled: Hess announced that they would idle three in the Bakken next year. Budgets are being cut:

ConocoPhillips is reducing spending by 20%, Shell is cutting its budget; Rosetta Resources announced a 21% budget reduction. Hercules Offshore is laying off over 300 workers. According to Drilling Info and reported by Reuters, November new well permits, which are indicative of activity in the next two to three months, were down almost 45% from October to 4,520 new wells.

The impact on tank storage

While the Brent crude oil market has been in contango for several months. It has been only recently that the WTI market has returned to a small \$0.30-\$0.35 per barrel per month contango. This is quite a difference from the \$0.80 to \$1 backwardation seen only a few months ago.

As oil prices decline and national oil companies reduce their official sales price, refiners will begin to turn the crude oil surplus into a petroleum product surplus. Canadian crude oil has been sold into the European markets while processed condensate exports from the US are now reaching European and Asian markets

A contango market structure may soon provide an incentive to store products. A precursor to this phenomenon is when the geographical flow of product begins to change. While Asia has been leading the growth in demand for petroleum products, jet and diesel fuel is now being marketed for sale in the Americas. While the US has been a large supplier of diesel and gasoil into Europe, Russian diesel and gasoil is being marketed into the US.

The current surplus crude oil and petroleum products may once again benefit the storage operator, increasing the demand for tankage and resulting in higher storage rates. As Yogi Berra once said: 'It's déjà vu all over again'. 