



Oil Watch: Drill Baby Drill

Posted by [Euan Mearns](#) on January 30, 2013 - 10:36am

Executive Summary

In January 1995 there was a total of 1738 oil and gas rigs drilling globally (excluding the former Soviet Union (FSU)). By February 2012 that number had more than doubled to 3850. Global C+C+NGL production grew from 68 to 84 million bpd (24%) over the same period.

Global drilling for oil and gas is dominated by North America, in particular the USA. In January 1995 there were 737 oil and gas rigs drilling in the USA, 42% of the world total. By October 2011 this figure had grown to 2010 rigs, 55% of the world total.

Proportionally, the USA has increased its drilling effort compared to the rest of the world and currently benefits from lower oil prices, significantly lower natural gas prices and higher economic growth than many OECD peers.

Does the rest of the world need to wake up and to drill baby drill?

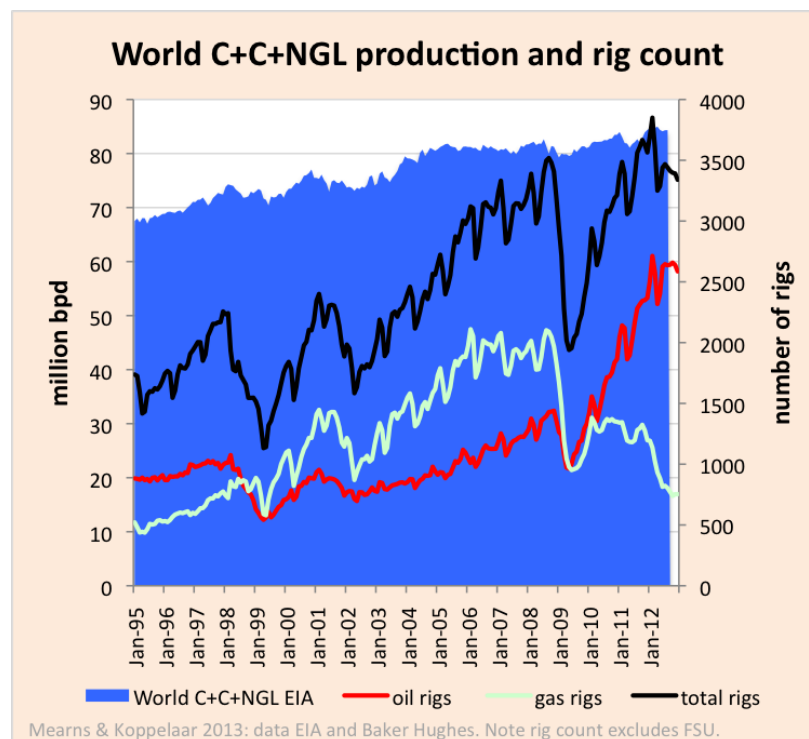


Figure 1 Global oil, gas and total rig counts from [Baker Hughes](#) compared with global crude+condensate+NGL production from the [EIA](#). Note that Baker Hughes does not include data for the FSU.

The overall structure of the global rig count data is controlled by North America. The fall in drilling activity in 1998 was due to chronic low oil prices less than \$10 / barrel; the fall in 2001

was due to recession in wake of the dot com bust and the fall in 2008 was due to the financial crash. The annual cyclicality in the data comes from Canada, where drilling is reduced during the Spring thaw. The near term peak of 3850 rigs was in February 2012 and it remains to be seen how the fall in drilling activity since then pans out. It is possible this is linked to a realisation that drilling shale is not profitable. The huge switch from gas to oil drilling post-2009 is discussed below the fold.

Oil Watch posts are joint with [Rembrandt Koppelaar](#).

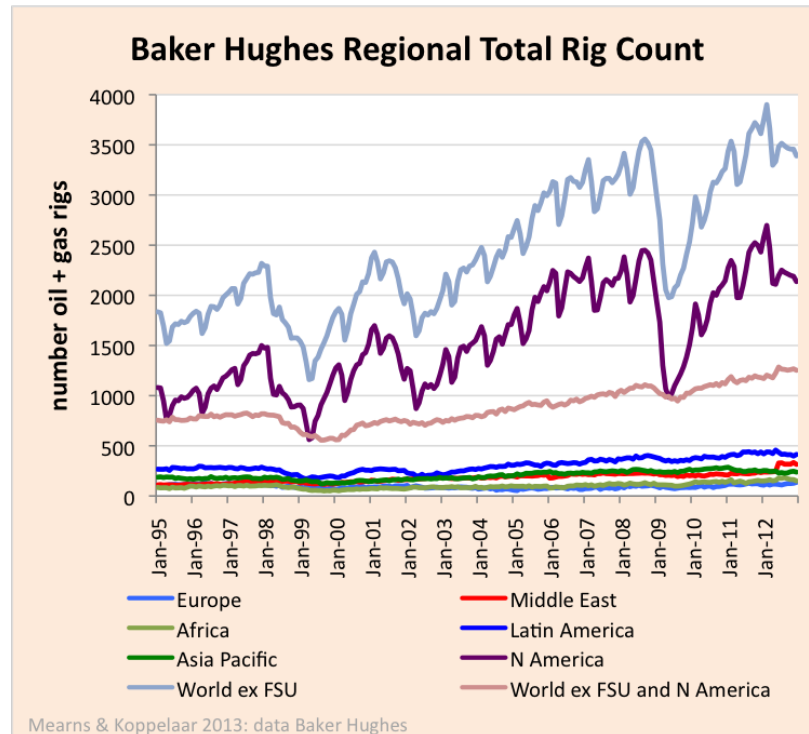


Figure 2

Figure 2 shows how the structure of the global rig count is controlled by N America. **In Dec 2012 N America accounted for 64% of the global total.** Drilling in N America is also much more volatile than in the rest of the world, hence N America dominates the structure of the global data. The detail for the other regions is shown in Figure 3.

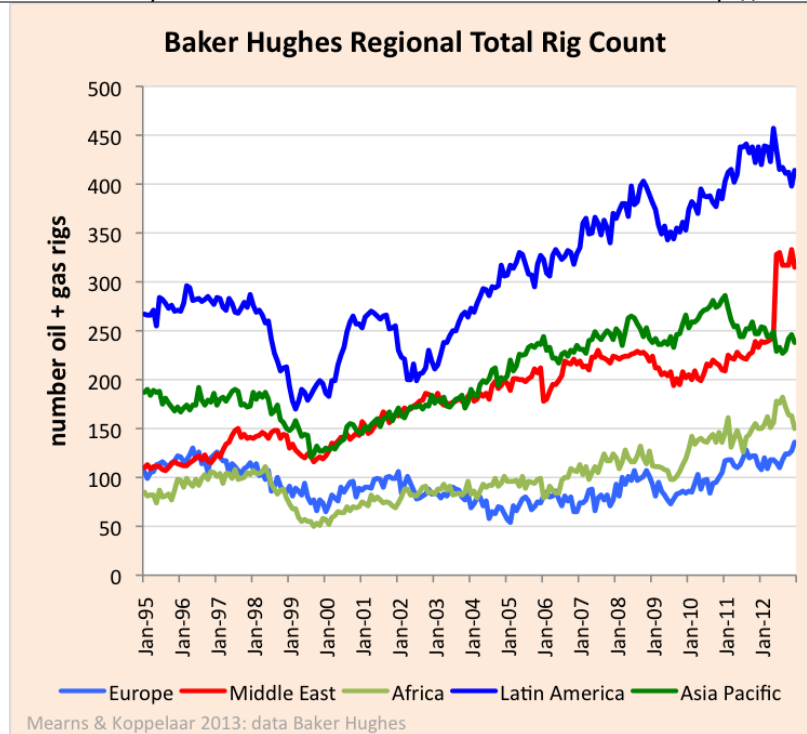


Figure 3

After N America, Latin America (that includes Mexico) leads the drilling charts (Figure 3). The overall structure is similar to N America. Rig count has grown by 55% since Jan 1995 from 267 to 414 rigs in Dec 2012.

The Middle East shows a major increase in rigs by 186% from 110 rigs in Jan 1995 to 315 rigs in Dec 2012. The amazing thing about The Middle East is that they were able to sustain 20 million bpd production in 1995 with only a handful of rigs drilling wells. In 2005 the production world changed as depletion of reserves in aging supergiants meant that a higher level of drilling was required to maintain production (see Figure 7 for Saudi Arabia). The step down in the data in June 2005 is due to cessation of reports from Iran and the step up in June 2012 is due to the beginning of reports from Iraq. Note that Egypt and Sudan are included with the Middle East by Baker Hughes and these countries have been deducted from the Middle East statistics and included with Africa in this report.

The rig count for the Asia Pacific shows a marginal increase of 27% from 187 rigs in Jan 1995 to 238 rigs in Dec 2012 (Figure 3). The peak number was 286 in Jan 2011 and the decline since then most likely reflects redeployment of rigs to other regions that are presumably viewed more favorably.

The rig count for Africa has grown by 76% from 85 rigs in Jan 1995 to 150 in Dec 2012. Whilst this is a steady increase it is still a very low level of drilling activity for such a vast and locally oil and gas rich continent.

The rig count for Europe is essentially flat over the period though shows signs of rising towards the end of 2012. This is due in part to a rise in land rigs drilling in Turkey but the North Sea also shows a small uptick.

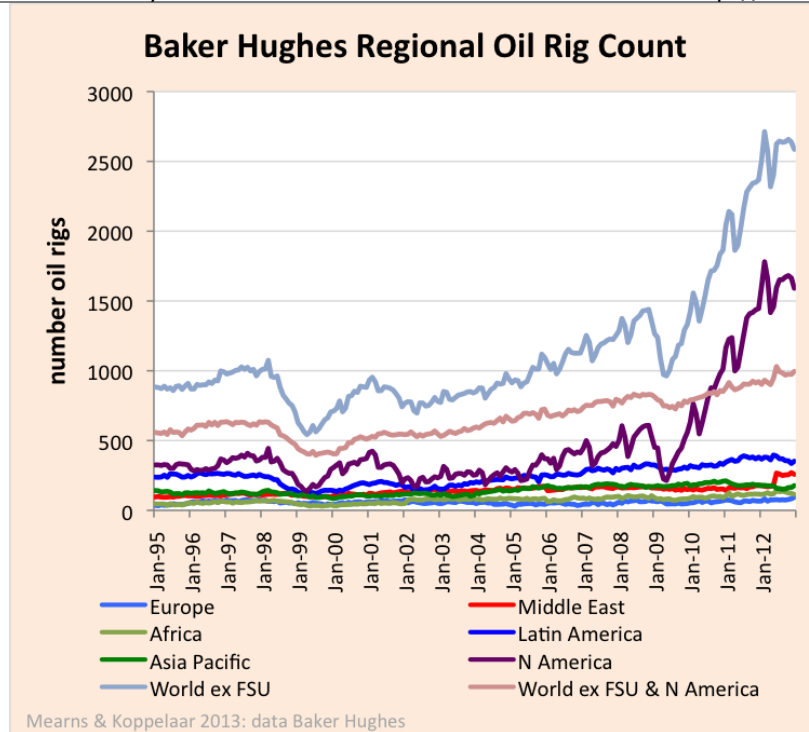


Figure 4

Since the year 2000, significantly more of the world's rigs were engaged in drilling for gas than for oil (Figure 1) but since 2009 this has changed dramatically with gas drilling continuing to decline and rigs being reassigned to drilling for oil to the point that 76% of rigs are now engaged in drilling for oil. This whole pattern is dominated by a switch from drilling for shale gas to shale oil in the USA as discussed below. Up until 2009 there were significantly more rigs drilling for oil in the rest of the world than there was in North America (Figure 4) but since then oil drilling has shot up in North America so that there is now significantly more rigs drilling for oil in North America than in the rest of the world.

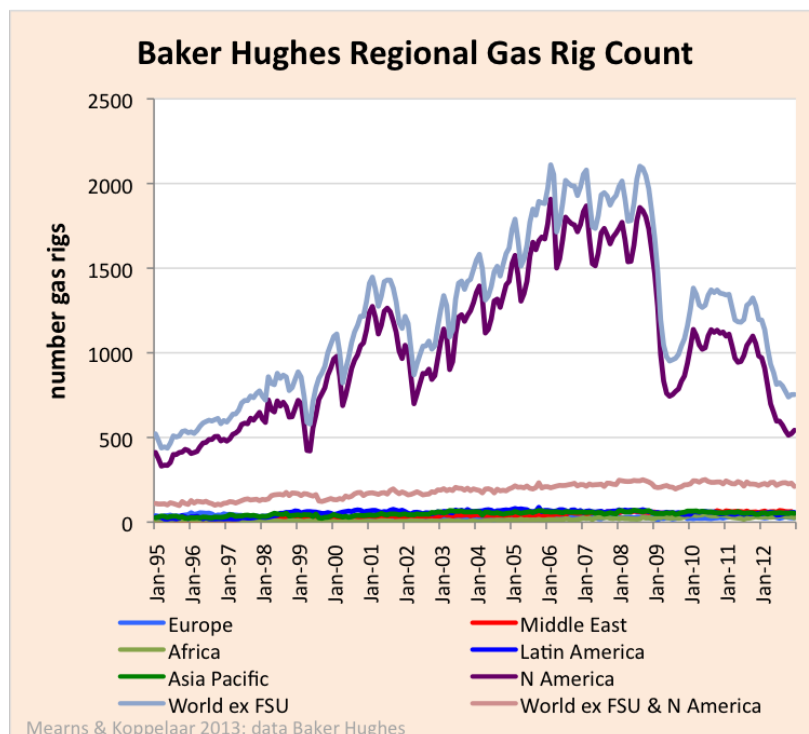
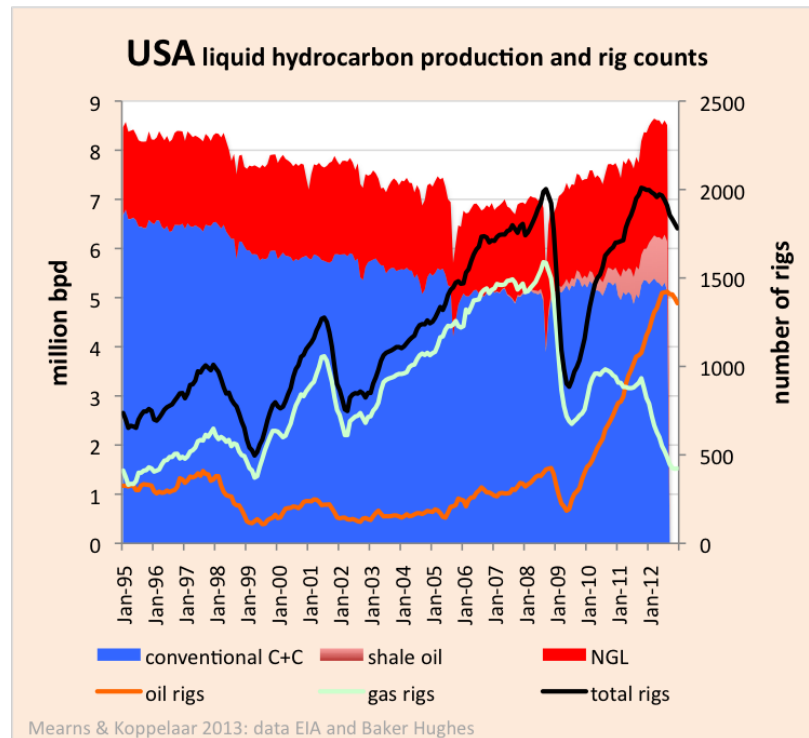


Figure 5

Every now and then we stumble upon a statistic that is difficult to comprehend. Global gas drilling statistics is one of these. In mid 2008, 88% of all gas drilling in the world (ex FSU) was taking place in N America. As already discussed, since 2009 there has been a major re-deployment of rigs to drill oil instead of gas (Figure 5). It is difficult to understand what is going on in the psyche of the rest of the world. Can we not be bothered to drill for vital fuel? Or is this linked to the geopolitical location of reserves in countries with national energy corporations? Perhaps a bit of both.

**Figure 6**

With the USA dominating global drilling, it is of course worthwhile to take a closer look at the drilling and production statistics for that country (Figure 6). The "drill baby drill" frenzy reached a peak of 2002 rigs in September 2008 when the financial crash took control of events. This peak was narrowly passed with 2010 rigs operating in October 2011, but since then operational drilling has declined significantly. Figure 6 shows how oil has been prioritised over gas since 2009. Gas rigs peaked at 1589 in August 2008 and have since declined to 423 rigs in December 2012, but over this period gas production has continued to rise as a backlog of wells drilled have been brought onstream and hooked up to the distribution network. It seems likely, however, that oil wells will be brought on straight away, and for example, associated gas in the Bakken is simply flared. The shale oil drilling frenzy has produced around a 1 million bpd contribution to US and global oil production. But this has taken around 55% of the global drilling effort (see summary at top).

Oil drilling has recently turned down in the USA (Figure 6). If shale oil production was to continue rising into the future, we would expect to see the rig number continuing to go up. It remains to be seen if the recent downturn in US oil drilling is temporary and what reasons lie behind this reversal.

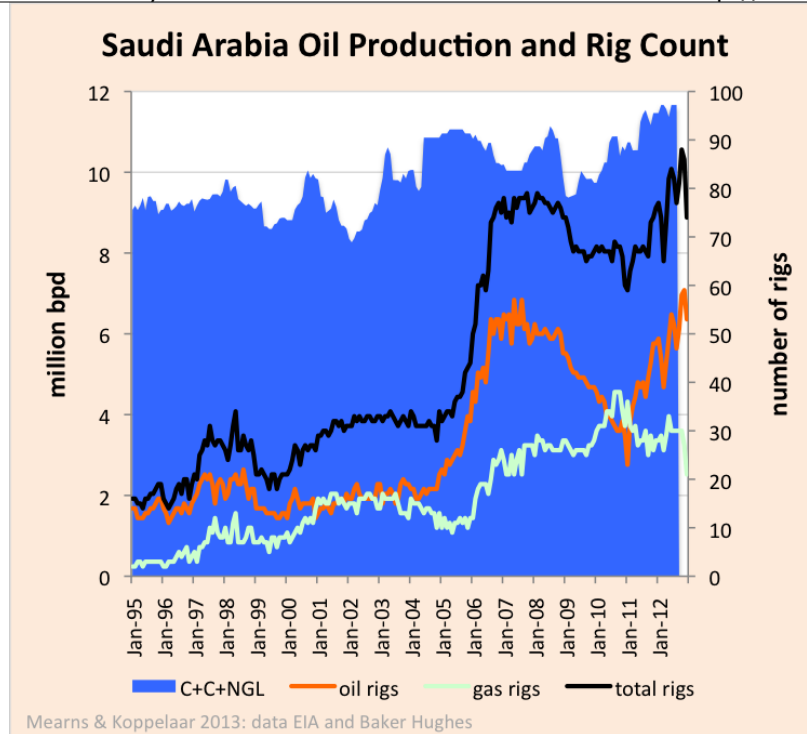


Figure 7

Finally, it is worth taking a look at Saudi Arabia (Figure 7). The number of rigs operating in the Kingdom reached a record high of 88 in October 2012 and there has to be a message in that statistic in itself. The split was 58 oil and 30 gas. But Saudi Arabia continues to produce around 11.7 million bpd on a slowly rising bumpy plateau with a relatively tiny number of operational rigs. The production world changed in Saudi Arabia in 2005 when the drilling rig count more than doubled, drilling new wells to combat declines from legacy assets like Ghawar. Like the USA, there has been a recent prioritisation of oil drilling over gas. With Brent crude trading at over \$113 / barrel it is quite clear that the world's major producers are working flat out to meet demand.

Data Limitations

Baker Hughes provide a service to the global community by publishing their extensive rig count database. However, like many complex sets of statistics, the data has a number of limitations as follows:

1. The main limitation of the Baker Hughes rig count is the omission of data from the FSU.
2. The count misses the drilling activity of large fixed offshore platforms some of which are continuously engaged in drilling oil and gas production and exploration wells.
3. The "International" data is reported monthly from January 1995, which is the datum used in this report. North American data is reported weekly and has been transformed to monthly averages using an XL macro. The US weekly data begins in July 1987 while the Canadian weekly data does not begin until March 1998. There is monthly data for Canada going back to 1964 but this is for total rigs, not broken out by oil and gas.

From Baker Hughes Baker Hughes has issued the rotary rig counts as a

service to the petroleum industry since 1944, when Hughes Tool Company began weekly counts of U.S. and Canadian drilling activity. Hughes initiated the monthly international rig count in 1975. The North American rig count is released weekly at noon central time on the last day of the work week. The international rig count is released on the fifth working day of each month.

The Baker Hughes Rig Counts are an important business barometer for the drilling industry and its suppliers. When drilling rigs are active, they consume products and services produced by the oil service industry. The active rig count acts as a leading indicator of demand for products used in drilling, completing, producing and processing hydrocarbons.

Baker Hughes Rig Counts are published by major newspapers and trade publications, are referred to frequently by journalists, economists, security analysts and government officials, and are included in many industry statistical reports. Because they have been compiled consistently for 60 years, Baker Hughes Rig Counts also are useful in historical analysis of the industry.



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