

## Oil companies running hard to stand still

The following article, by Melbourne ASPO member Phil Hart, was published in the business section of The Age on Friday 16th March, 2007 :

DURING a previous oil price crisis in the United States, a jovial service station attendant may have remarked to customers that "We've run out of \$2 gas, but we've got plenty of \$5 gas". Attendants on the trading floors might today observe that we've got plenty of \$80 (US) barrels, but we're running short of \$50 barrels.

Last Friday, the US Energy Information Administration released oil production data to the end of last year. Crude oil production was nearly 200,000 barrels a day lower than in 2005. Total liquid supply was flat. That's gripping news and should be enough to rattle any economist's confidence.

Despite a calm hurricane season, record prices and a forecast consensus from energy agencies that supply would continue to grow, oil production stalled last year. Were the oil companies not trying hard enough?

Chris Skrebowski, editor of the British oil industry journal Petroleum Review, would not agree. He has just published his annual Megaprojects report. The numbers show the global oil industry implemented oilfield projects providing an extra 3.2 million barrels a day to the market last year.

This is a historically high level of activity. So why was production flat, and even falling in many countries? The answer begins with "d" and gets to the heart of the debate about when global oil production will finally peak and begin its terminal decline: depletion.

A typical oilfield is a layer of sandstone buried far underground, with oil filling the tiny spaces between the grains of sand. Buried so deeply, the oil is under extreme pressure. When a well is drilled into the reservoir, the oil eagerly flows up to the surface. Then, with less competition for space in the reservoir, the pressure falls and the flow rate declines. To compensate, the operator drills more wells and can put in place elaborate mechanisms to maintain pressure in the field.

For several years, even decades for the largest fields, it is possible to continue extracting oil at a high rate. Inevitably though, the amount that flows from the reservoir begins to decline.

Many of the world's largest and oldest oilfields are succumbing to this fate; production is falling, sometimes rapidly. Two of the biggest fields, Cantarell in Mexico and Burgan in Kuwait, are confirmed in this category. Even the giant Ghawar field in Saudi Arabia, the largest discovered, may be showing the same symptoms of old age.

Despite enormous industry efforts, production from the largest fields and regions such as the North Sea is declining. Companies must now exploit new frontiers. They are taking enormous strides; into deep water off Africa and Brazil, remote areas of the Caspian and East Siberia, and also into unconventional Canadian tar sands. All this and more in a bid to shore up falling production in old heartlands.

The oil industry is running hard but only just managing to stand still. The size of discoveries in the new frontiers is falling. Depletion, the rate production is declining in existing oil provinces, meanwhile, increases.

In just a few years, the scales that are now finely balanced between new production coming on stream and declines in mature regions may lean more heavily on the side of depletion. Peak oil would then be behind us and our economies will be forced to survive with less oil each year.

What then for oil prices? Supply can no longer increase to meet rising expectations. Increasing oil prices over the past five years, and the subsequent fall in vulnerable housing markets, have pushed the US towards recession. Perhaps that move already has enough momentum to keep a lid on consumption. If not, prices will rise again to further destroy demand. Either way, the fate of the world's largest economy may already be sealed.

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