



## Gas fields also deplete, but faster

Posted by [Heading Out](#) on November 19, 2005 - 2:04am

Topic: [Supply/Production](#)

Tags: [depletion rate](#), [natural gas](#), [new zealand](#), [united kingdom](#), [united states](#) [[list all tags](#)]

One of the side benefits of attending the World Oil meeting in Denver last week was that I could pick up a few of the DVD's that Global Public Media had available including a long interview with Colin Campbell. Watching the first half of that tonight, I was reminded by him, that while we are discussing the depletion rates for oil, the more critical one for immediate attention is that for natural gas.

When one taps an oil reservoir the oil requires a certain amount of differential pressure to push it towards the well, and with the passages it must pass being generally narrow, flow is relatively constricted. Good well management means that, in order to control water and gas problems, the pressure difference between the well and the rock is carefully controlled, and this allows the oil to be effectively recovered at rates which, while worryingly increasing, are still generally considered to be less than 10%..

Natural gas, on the other hand, flows a lot more easily, and normally does not have a lot of the constraints that producing oil has. Thus, if your pipeline can handle the flow, and there is a demand, the gas field can be drained much more rapidly, with a consequent dramatically more rapid conclusion to the flow. As Dr Campbell pointed out fields may last just months, and then "boom" they are gone.

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(The [EIA](#) point out that in 1970 gas well depletion rates were 20%, and by 1996 had reached 49%.

the average production from natural gas wells that began producing in 1996 was 69 percent lower than it had been at its peak. In contrast, the decline in production over the 23 months after wells drilled in 1972 had reached their peak production was only 39 percent.

Alan Greenspan in his [testimony in 2003](#) pointed out that as more tight sands were produced the rate of decline was reduced, because of slower flow and this brought the average back to 27%.

There is a [natural gas primer](#) that, as well as quoting Charlie Brister, also points out that for the average new Texas well, the first year decline in production is 56% and that half the gas in the well is produced in the first two years. It was written in 2001.

More recently [Dominion](#) points out that depletion rates are up to 28% with it taking between 6 and 18 months to get a new well production to market. There is a case study from the [Maui field in New Zealand](#)

Production this year (2004) was 21.6% less than the 2003. Production in 2003 was 33.5% less than in 2002. In 2002 the Maui natural gas field produced a volume of gas higher than it ever had in its past.

. The article notes that the gas from this field provides 25% of New Zealand electric power. The field is now apparently anticipated to be completely closed by 2007.

It is this unwelcome fact that means that the major efforts to drill for more gas production will be no longer be able to keep up with losses, as we discussed [earlier](#). But then if we think it is bad here, the graph that [civ101](#) posted on UK gas production shows where this is all heading, rather rapidly I am afraid.



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