



On production rates and refinery capacity

Posted by [Heading Out](#) on April 11, 2006 - 1:37pm

Topic: [Supply/Production](#)

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There are a couple of points that are worth bringing forward from the comments over the past couple of days or so, and with your indulgence I would like to do this.

The first related to some discussion on the relative production of Saudi Arabia, among others, and the fact that, with Haradh, they had just added 300,000 bd to their capability. The point that has been made here before, is that the Saudi wells are currently seeing about 8% depletion from existing structures, on average. We have referenced the relevant Aramco quotes on this before, but it has just [popped up again](#).

"Saudi Aramco's mature crude oil fields are expected to decline at a gross average rate of 8%/year without additional maintenance and drilling," a Saudi Aramco spokesman said Tuesday.

But Saudi Aramco has taken a number of measures to offset a decline in output from the country's aging oil fields, the spokesman added. "A variety of remedial activities are always being taken in oil fields influencing their effective decline rates," the spokesman said. "The drilling of additional development wells in the producing fields is Saudi Aramco's standard practice to offset normal declines of older wells."

The Aramco intent is to carry out a sufficiently aggressive drilling program so that

"This maintain potential drilling in mature fields combined with a multitude of remedial actions and the development of new fields, with long plateau lives, lowers the composite decline rate of producing fields to around 2%," the spokesman said.

Now those of you who have removed your socks, will quickly calculate that this is still around 180,000 bd, or about half of the slated production from Haradh, but wait! This depletion rate INCLUDES the development of new fields. Oh!

And, another gentle cough and a quick visit to [Baker Hughes](#) tells us that they have 37 rigs drilling for oil and 17 drilling for gas. If the oil rigs are 90% successful and can drill 6 wells each a year, and each producing well averages 3,100 bd, then the new production they will generate this year is $37 \times 6 \times 3,100 \times 0.9 = 619,380$ bd, regardless of how big their reserves are.

The other point I wanted to note comes from a comment that [Robert Rapier started](#) and that led to [the Billings Gazette](#) and a story that local oil prices are falling and wells are being shut in.

Sharp cuts of \$10 to \$30 a barrel off the posted regional prices in the Williston Basin are being reported, and some producers have started to shut down wells rather than sell, even if there is room on a pipeline to ship it out.

The static refining capacity in the United States, increased production in the Canadian Tar Sands and limited capacity on pipelines are among the reasons given for the steep pricing discounts. The Williston Basin straddles the northeastern Montana, northwestern North Dakota border. The highly productive Bakken field near Sidney is part of the basin.

"This is sending seismic shock waves through the Northern Rockies," said Tom Hauptman, a Billings oil and gas producer. "Some are being told, 'We don't want your product.' The posted prices are being discounted by \$20.45 a barrel."

Part of the problem appears to be the current down-turn in refining capacity (we are in maintenance season as well as still being a couple or three refineries short after Katrina) that may be more locally tied to increases in production from the oil sands of Alberta that are close by. The discussion in that earlier post was sufficiently intriguing that I thought it worth bringing the topic forward.



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