



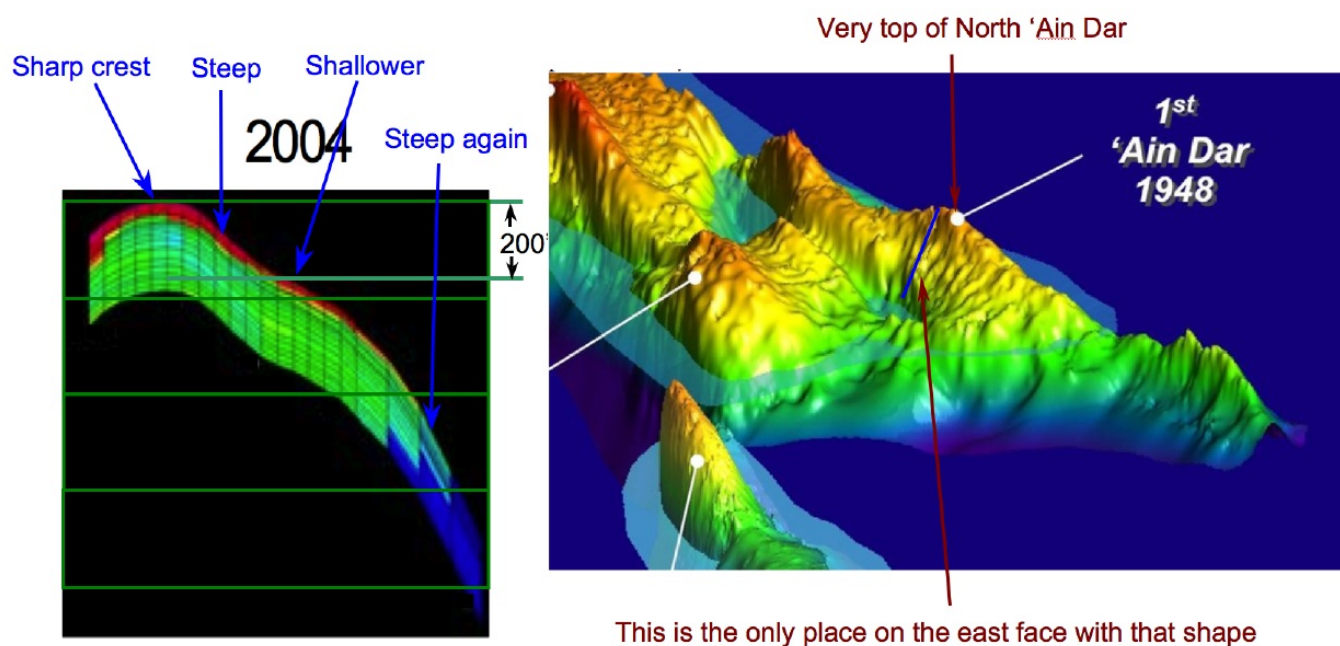
Further Saudi Arabia Discussions

Posted by [Stuart Staniford](#) on April 6, 2007 - 9:05am

Topic: [Supply/Production](#)

Tags: [ghawar](#), [peak oil](#), [saudi arabia](#) [[list all tags](#)]

Update: North 'Ain Dar is soooo over...:



2004 Fig 9b cross section from SPE 93439, together with location on map from [Ghawar: The Anatomy of the World's Largest Oil Field.](#), with hat-tip to garyp. Click to enlarge - really, it's worth it.

Update:

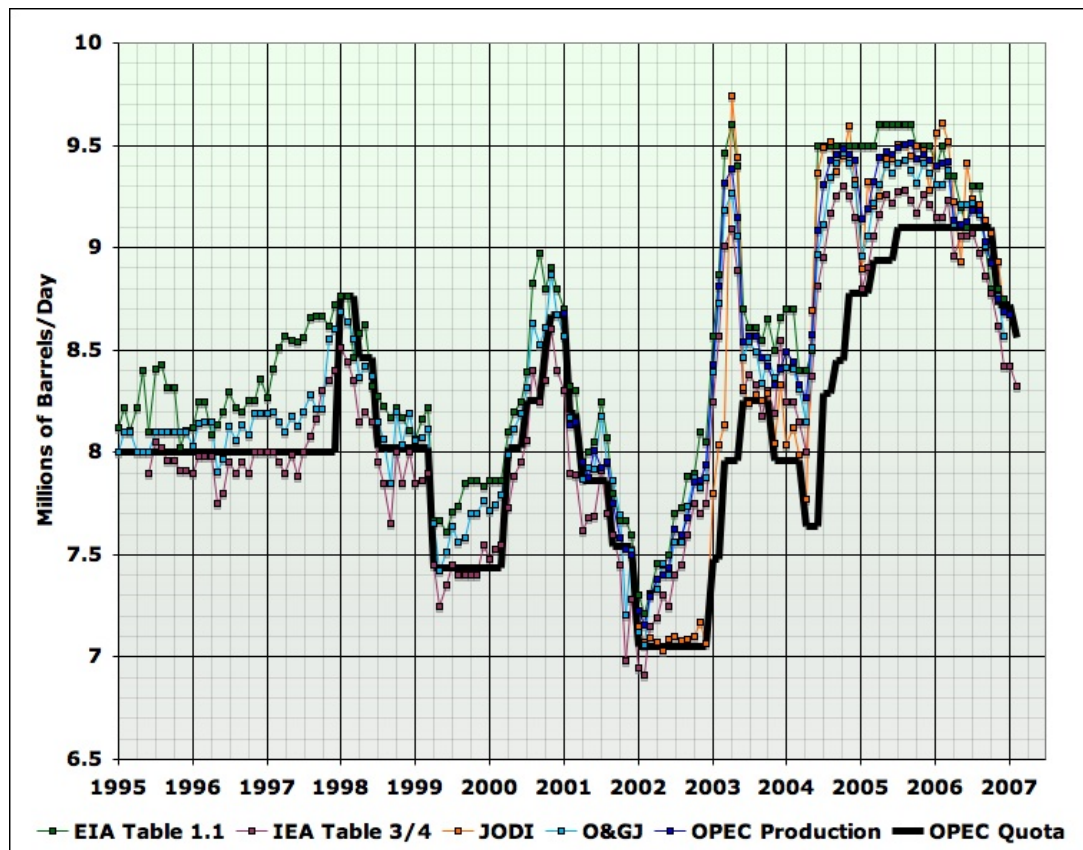
And the rest of North Ghawar might not be too far behind... Bob Shaw found this picture [here](#):

Oil saturation in reservoir simulation of all of Ghawar. Date unknown but believed not later than 2004. Click to enlarge.

The temptation to publish all this gorgeous reservoir simulation porn has just been overwhelming to Aramco's engineers I guess...

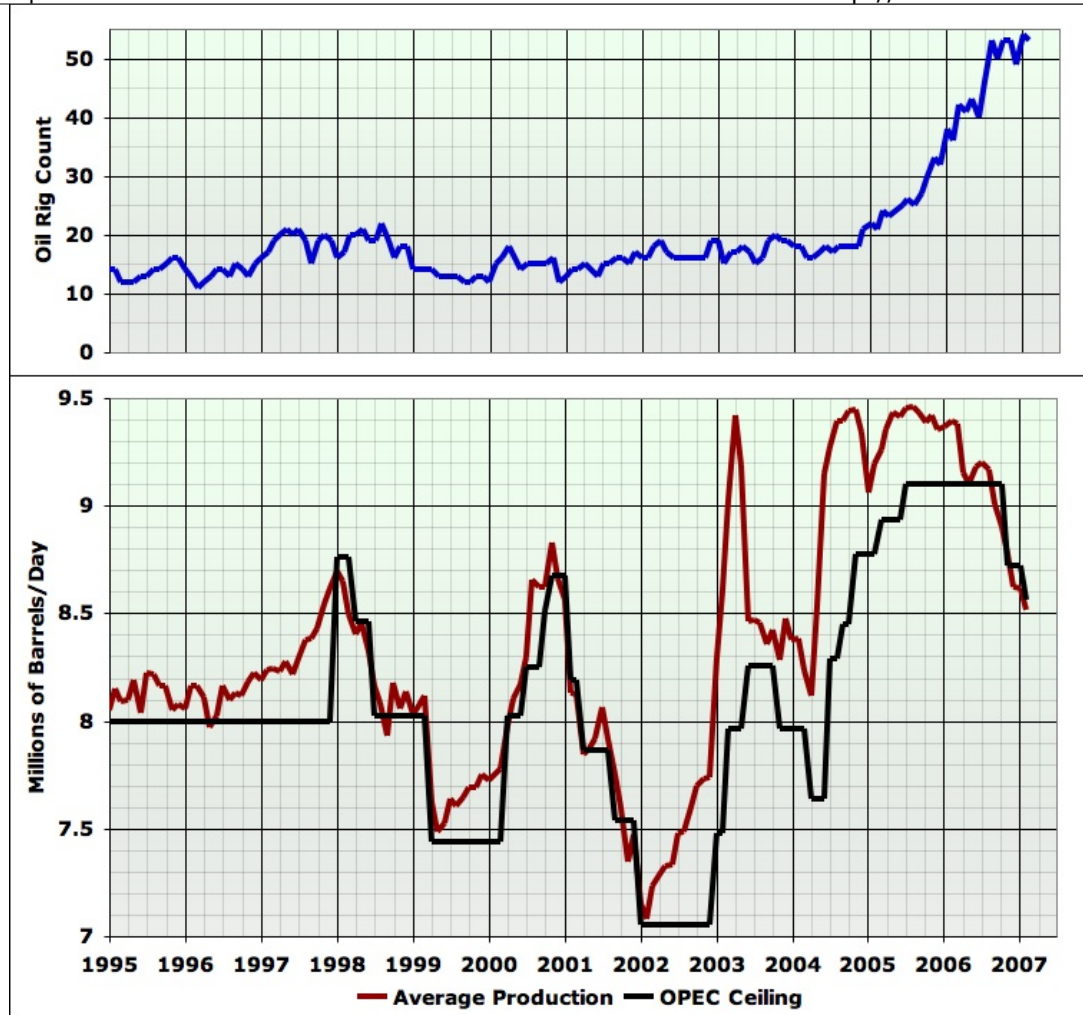
This post is a place to continue the Saudi Arabia discussion. To keep the ball rolling, I've extended a couple of my graphs. The above graph is the production data, with all series extended back to January 1995, or as far back as they are available online. I've also added a fifth series from the Oil

and Gas Journal. Plotted on the picture is Saudi Arabia's OPEC oil quota.



Five estimates of Saudi Arabian oil production, Jan 1995-Feb 2007, together with OPEC quotas at the time. Click to enlarge. Source: [US EIA International Petroleum Monthly Table 1.1](#), [IEA Oil Market Report Table 3](#), [Joint Oil Data Initiative](#), [OPEC Monthly Oil Market Report, Table 17 \(or similar\) on OPEC Supply](#), [Oil and Gas Journal](#), and [OPEC for quotas](#).

I showed production against the quota since some folks have been suggesting that perhaps the recent declines represent Saudi Arabia's attempt to return to quota. Here's a production index constructed from the five series, together with quota (and rig count at top).



Top: Rig count in Saudi Arabia from [Baker Hughes](#). Bottom: Average production index constructed from five estimates of Saudi Arabian oil production, Jan 1995-Feb 2007, together with OPEC quotas at the time, together with OPEC quota. Click to enlarge. Source: [US EIA International Petroleum Monthly Table 1.1](#), [IEA Oil Market Report Table 3](#), [Joint Oil Data Initiative](#), [OPEC Monthly Oil Market Report, Table 17 \(or similar\) on OPEC Supply](#), [Oil and Gas Journal](#), and [OPEC for quotas](#). Index is the average of the five series between January 2002 and December 2006. Outside that range it is extended by applying month to month differences of however many series are available in each time frame.

I don't find the "return to quota" explanation very appealing, since the decline begins over a year before quota starts to drop, when prices were rising, and the index has now gone below quota despite continued fairly high prices. But another few months of data should say a lot more.



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