The Oil Drum
DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

More background - current Saudi production

Posted by Heading Out on April 9, 2005 - 12:39pm

One of the interesting detective puzzles in trying to decide both how badly off we are, and how soon it will get worse, is to look at the oilfields in Saudi Arabia. Right now these are the major source for any increase in supply. As best I can determine at present the oil is coming from the following fields with the flow given in thousands of barrels a day (kbd):

> Abqaiq 400 kbd;
> Abu Sa'fah 200 kbd;
> Berri 300 kbd;
> Ghawar 4,500 kbd;
> Hawtah 200 kbd;
> Hout 300 kbd;
> Khurais 300 kbd;
> Marjan 270 kbd;
> Qatif 800 kbd;
> Safaniya 700 kbd;
> Shaybah 600 kbd; and
> Zuluf 500 kbd.
> This adds up methinks to 9.07 mbd.

The Abqaig and Ghawar fields have been a major source for many years and have really underpinned Saudi production. They are currently declining in production and there is a real worrying concern about the way they are now getting the oil from these fields.

They have switched to horizontal wells, rather than vertical ones which is initially a good idea. However at the same time they are pushing the oil to the wells by pumping water down into the rock below the oil level. Changing the well direction, when combined with an intense water flood, can lead to a very rapid drop in production, particularly if there is an attempt to increase the flow from the wells above a critical level.

How do we know this, well this is exactly what happened not too long ago with a similar (though not quite as large) oilfield in Oman, called the Yibal field. After an initial increase decline has been dramatic. Normally an oilfield declines at perhaps 5% a year this dropped at more than 12% and created a big problem for Shell.
It was actually these concerns on the potential imminence of the collapse of the major Saudi fields, rather than the growth in world oil demand that worried me most last year.

Technorati tags: peak oil, Saudi oil