Peak Update

Posted by Sam Foucher on September 14, 2006 - 10:45am
Topic: Supply/Production
Tags: bp, chris skrebowski, eia, logistic, loglets, m. king hubbert, oil, oil prices, peak oil [list all tags]

I'm proposing to track the last production numbers from the EIA and check how well the different oil production forecasts are performing.

[Update by Khebab, 02:00PM EDT] I've just added two forecasts: Bakhtiari and Koppelaar

I put together the following production numbers and forecasts:

- Production data from BP Statistical Review of World Energy 2006 (Crude oil + NGL).
- EIA data (monthly and annual productions up to June 2006) for crude oil and lease condensate on which I added the NGPL production.
- A simple demographic model based on the observation that the oil produced per capita has been roughly constant for the last 26 years around 4.4496 barrels/capita/year. The world population forecast employed is the UN 2004 Revision Population Database (medium variant).
- Logistic curves derived from the application of Hubbert Linearization technique by Stuart Staniford (see this post).
- Results of the Loglet analysis.
- Chris Skrebowski's megaprojects database (see discussion here).
- The ASPO forecast from the last newsletter (#69): I took the production numbers for 2000, 2005, 2010, 2015 and 2050 and then interpolated the data (spline) for the missing years.
- Rembrandt H. E. M. Koppelaar Oil Production Outlook 2005-2040 -- Foundation Peak Oil Netherlands (2003).
- The WOCAP model from Samsam Bakhtiari (2003).

Most of the datasets above are compiled in an EditGrid spreadsheet.

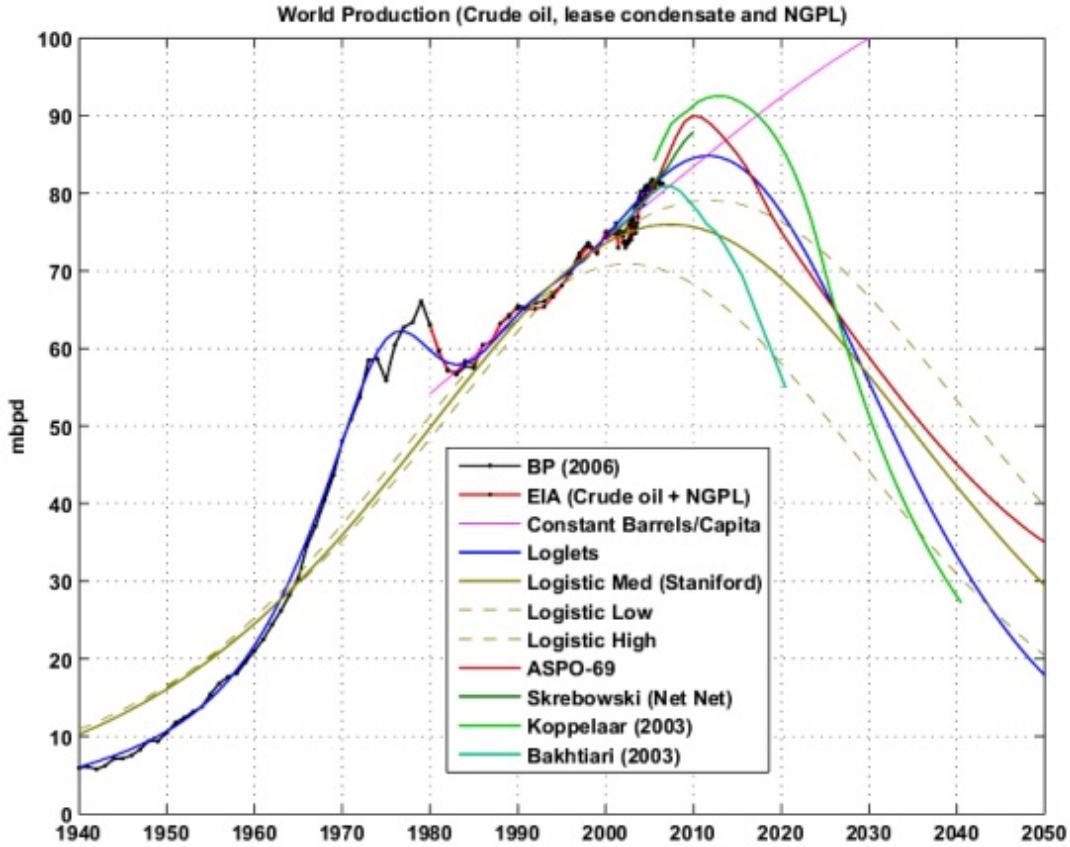

Fig 1.- World oil production and various forecasts (1940-2050).

A closer look on the 2000-2015 period:

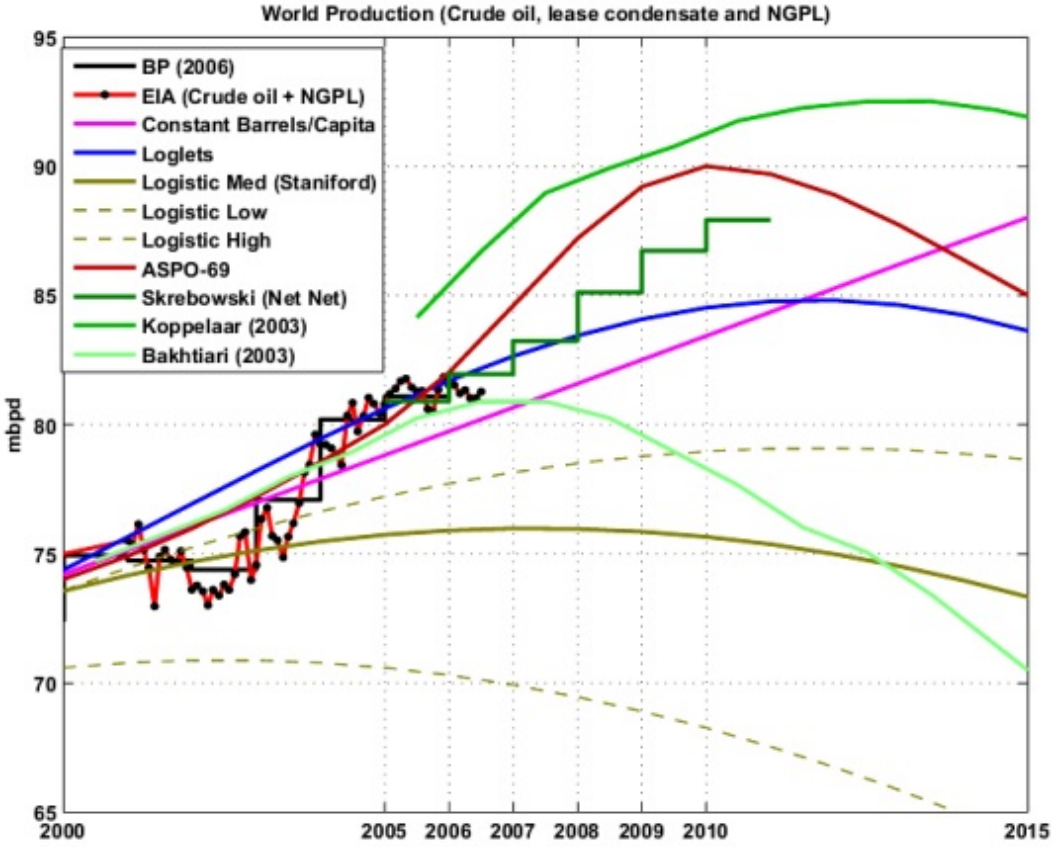

Fig 2.- World oil production and various forecasts (2000-2020).

The observed growth rates are low but have been lower before (around 2001):

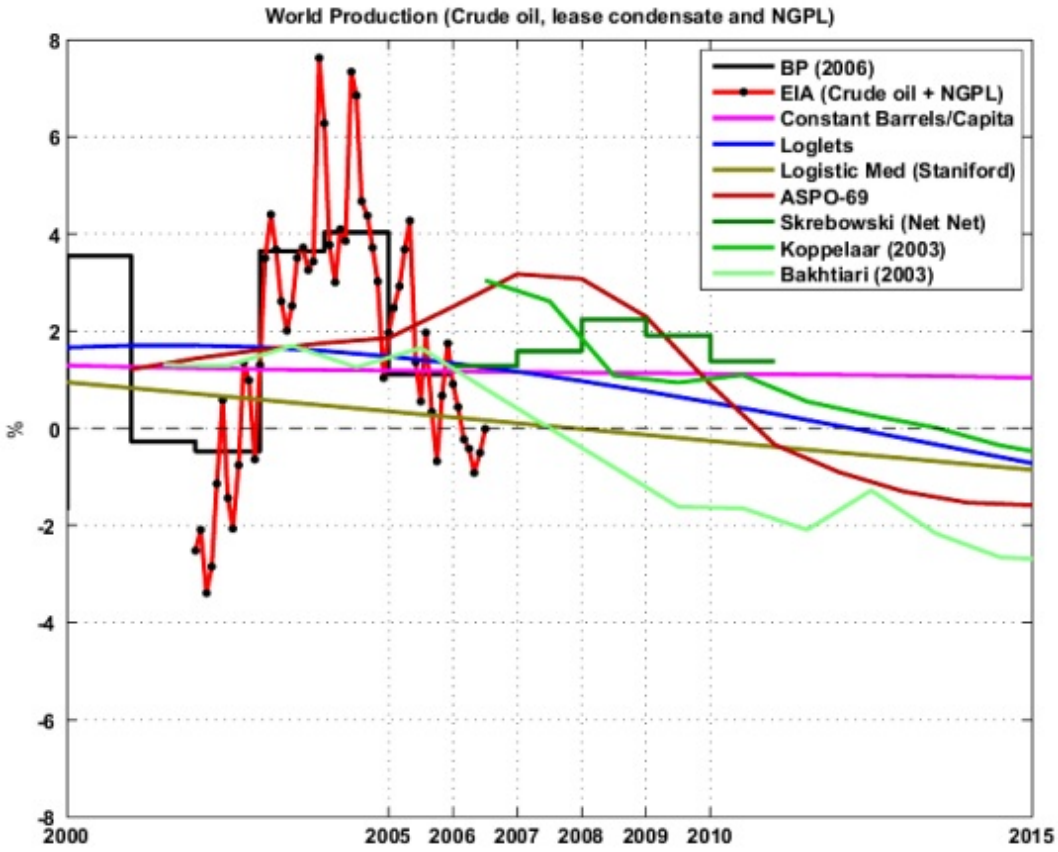

Fig 3.- Year-on-Year production growth rates (or decline rates).

So far, the Loglet analysis, Skrebowski's megaprojects and the population based model are the most consistent with the last production numbers. The WOCAP model (Bakhtiari) is also surprinsigly good especially knowing that this forecast is from 2003. The ASPO and Koppelaar forecasts seem too optimistic and the logistic curve too pessimistic.

Next update in October.