



Peak Oil Review

Vol.2 No. 37
September 3, 2007

[Tom Whipple](#), Editor

ASPO-USA's world oil conference is in Houston, October 17-20; visit www.aspo-usa.com

1. Production and prices.

For another week fears of a credit-crisis induced recession competed with falling stockpiles and the threat of a hurricane getting into the Gulf oil fields to keep oil prices volatile. By the end of the week, however, Wall Street seemed satisfied that the Federal Reserve could and would save us from a recession so hurricanes and stockpiles took over to drive oil prices to \$74.

The weekly US stocks report showed crude inventories slipped by 3.5 million barrels and gasoline inventories by 3.6 million. At 192.6 mmb, US gasoline inventories are well below normal and the decline was greater than analysts expected. The US gasoline delivery system requires a "minimum operating level" of gasoline (in transit fuel not available for delivery to gas stations) that is probably something on the order of 180 mmb. In some parts of the country, local gasoline inventories contain only a few days of reserves should supply disruptions occur. The EIA reports that the gasoline stockpile deficit is particularly severe in the Midwest.

Hurricane Felix seems headed for a Belize/Yucatan replay. It may slow oil and gasoline shipments from Venezuela, the Caribbean refineries, and perhaps the Mexico oil fields again. A third storm which may head in a more northerly direction currently is forming in the Atlantic. Coupled with the stockpile situation, growing US demand and refinery outages, this year's hurricane season poses an unusually serious threat. Supply problems in the upper Midwest have already led to spot shortages in North and South Dakota, Nebraska, Iowa, and Minnesota.

Over in Europe, OPEC and the IEA continue to exchange words about the supply situation this winter. Senior OPEC officials profess deep concerns that the credit crisis will lead to a recession and less demand for oil. The IEA continues to argue that shortages will develop this winter unless OPEC increases production at their September meeting. At the minute, chances for an increase do not seem good.

2. Iraq

Last week, a Nevada Congressman returned from an August trip to Iraq where he was told by unnamed officials that a premature US troop withdrawal would result in \$9 a gallon gasoline in the US. The Congressman says he was told that without US forces, there would be genocide, a resurgence of al Qaeda, and Iran would take over the region. Fighting between Kurdish guerrillas and the Iranian forces continues with the Iranians shelling villages in Kurdish Iraq.

Last week British forces completed their withdrawal from the oil port of Basra, effectively leaving key facilities in the hands of Moqtada Al Sadr's Mahdi Army which is fighting for control of the port with other Shiite groups. Iranian President Ahmadinejad helpfully declared that US political influence in Iraq is "collapsing rapidly" and that his government is ready to help fill any power vacuum "with the help of neighbors and regional friends like Saudi Arabia, and with the help of the Iraqi nation."

With General Petraeus' report to Congress due this month, the situation seems to be coming to a head. A recent GAO report notes that it will require \$50 billion and many years of stability to get Iraq's oil and electricity industry up to 6 million b/d. This is after the US \$4 billion already has been spent on restoration. Given the proximity of the US federal elections and the growing distaste for the war, some sort of US force reduction seems likely in the next year.

So far Iraqi oil production is tottering along at about 1.5-2 million barrels per day and unless the British withdrawal from Basra results in increased fighting there, this level of production seems sustainable and agreeable to all parties concerned in the short term. As the revenue from oil sales amounts to 90 percent of Iraq's foreign earnings, all sides seem to fear the consequences of a complete production shutoff.

The Saudis seem to be increasingly concerned about the course of events in Iraq. Last week they announced an increase in their oil infrastructure protection force from 5,000 to 35,000 men.

3. Kazakhstan

In November 1997 a group of Western oil companies signed an agreement with the Kazakh government to develop the northern Caspian Sea. By 2000, exploratory drilling had determined that the Kashagan oil field was the largest discovered in 30 years and might be capable of producing 1.5 million b/d. Exploiting Kashagan oil turned out to be major technical challenge as the oil was 12,000 feet below the shallow seabed under 500 atmospheres of pressure, contains large amounts of deadly hydrogen sulfide and is frozen solid five months a year.

These technical problems coupled with disputes among the consortium partners resulted in delays and cost overruns that eventually became unacceptable to the host government. Startup of production was pushed back from 2005 to 2010 and costs for the initial phase increased from \$10 billion to \$19 billion.

Last week the Kazakh government, which had been counting on revenues starting in 2008, called a halt to the project by revoking the environmental permit. Accusing the consortium of numerous environmental, and fire and safety violations, the government is also threatening criminal charges for customs violations.

During initial talks with the oil companies, the government demanded \$10's of billions in compensation for the delays and possibly the replacement of Italy's ENI with a local company as the lead contractor.

Negotiations are likely to drag on for some time, thereby pushing off Kashagan's 1.5 million b/d of production to some unknown year in the future. Given the unprecedented technical difficulties of the project, it is unlikely anyone other than a consortium of the major western oil companies could muster the resources and technical knowledge to increase progress much faster.

Those who were hoping that near-term production from Kashagan would offset depletion elsewhere in the world are bound to be disappointed.

4. Energy Briefs

- Nobuo Tanaka of Japan took over as executive director of **IEA** from Claude Mandil of France. Tanaka meets with the head of OPEC on Wednesday, less than a week before OPEC meets to review oil output policy.
- The US Geological Survey now says the northeastern shore of **Greenland** might provide significantly less oil than previously estimated -- 9 billion barrels, down from the 2000 estimate of 47 billion barrels. The USGS said there is no current technology for exploring or developing oil and gas accumulations under sea ice such as those thought to lie in reservoirs in northeastern Greenland.
- Record global oil and gas profits of \$243 billion and record spending of \$401 billion have resulted in a marginal **1% increase in world oil reserves last year** -- all of it coming from a 1.9-billion-barrel addition from Canada's oilsands, according to a new study by John S. Herold Inc.
- **China** is building an average of two coal-fired power stations a week, and in six years has doubled its annual coal production. **India** will construct more than 100 coal-fired plants over the next decade.
- Crude output dropped in July at Mexico's **Cantarell** offshore field. Cantarell, closely watched by the oil industry after sharp dips in output in recent months, produced an average of 1.526 million barrels per day versus 1.570 million bpd in June.
- According to the Global Wind Energy Council, the U.S. ranks third in installed **wind capacity**, measured in megawatts, behind Germany and Spain. Oil-rich Texas has the most installed capacity by state.
- OPEC Secretary General Salem el-Badri said **Angola** will not be given a quota for oil production this year.
- In **Argentina's** court rooms, heat is being applied by the government against Shell. Government leaders accuse Shell of withholding supply and driving up prices. Shell counters that it is exceeding government requirements to increase supply by roughly 7%. ExxonMobil is seeking to sell its Argentine unit Esso.
- **Global oil majors** such as ExxonMobil, Royal Dutch Shell and Chevron Corp. are ready to pour billions of dollars into India's energy sector, but only if the government allows private industry to sell natural gas at market prices.
- **Iraq's Deputy Oil Minister** who was kidnapped two weeks ago in Baghdad was released in "good health".
- The President of **Tajikistan** warned the country "to seriously and in advance" prepare for major disruptions in energy supply during the coming winter. One of the major causes was a major decrease in water runoff to run hydroelectric plants.
- A fuel shortage in **Burundi** has led to rationing and doubling of prices. The shortage follows an order by the Burundi general prosecutor to impound trucks and fuel tankers belonging to Interpetrol Company and freeze all the company's bank accounts in Burundi.

- The **Nigerian** government plans to restructure its Energy Ministry and the Nigerian National Petroleum Corporation into five agencies. The creation of the new institutional structures is aimed at creating operational autonomy and minimizing undue interference.
- According to Nigerian elder statesman, Chief Albert Horsfall, the violence in **Port Harcourt** will not end soon as cults and militias permeate every level of government in Rivers State. From the most senior politician down to the local government chairmen, politicians control some cult members for their own protection or advancing their political cause.
- South Africa's Defense Minister said that more US soldiers are not welcome in **Africa**. He added that any country that allowed itself to be a base for the US strategic command in Africa (Africom) would have to live with the consequences and that this was also the "continental position" of the African Union.
- **OPEC** oil exports, excluding Angola, will jump 580,000 barrels per day (bpd) in the four weeks to September 15. Oil Movements estimated OPEC 11 seaborne exports would rise to 24.21 million bpd, compared with 23.63 million bpd in the four weeks to August 18.
- OPTI Canada and Nexen raised cost estimates for the first phase of their Long Lake, **Alberta** oil sands project to C\$5.83 billion-C\$6.1 billion, as labor shortages pushed the project's start up into 2008. This represents a 10%-15% increase over the previous C\$5.3 billion estimate, itself a C\$400 million hike made just four months ago.
- **Valero**, the largest U.S. refiner, may sell plants in Aruba and as many as four states to tighten its focus on processing cheap grades of oil that yield the industry's widest profit margins. The most likely U.S. plants to be sold are in New Jersey, Oklahoma, Louisiana and Tennessee,
- A recent increase in fuel prices that sparked a series of protests in **Myanmar** was triggered by spiraling global oil prices and was not a political move. Myanmar could no longer afford to subsidize fuel so heavily because of the steep increases in oil prices worldwide.
- Chevron Corp.'s early termination of a contract for a **drilling rig** in Nigeria has depressed shares of the offshore-drillers. Shallow-water rigs have been commanding ever-higher prices in every region except the U.S. Gulf of Mexico. But with new rigs poised to flood the market, most analysts see an end to the boom times in 2008 or 2009.
- **Venezuela will import natural gas** through a new pipeline from Columbia. Venezuela needs to import natural gas despite its own huge reserves because it lacks infrastructure and sufficient investment in natural gas output.
- Plans to bring **nuclear power to northern Alberta** were unveiled last week, but who'll be using most of the megawatts remained a mystery. The company said that 70 per cent of the 2,200 megawatts of electricity will be going to "one large, industrial off-taker"—presumably in the oil sands sector—but declined to name names.
- Companies are snapping up drilling rights in the **Gulf of Mexico** on a scale not seen since the late '90s. The new oil rush has as much to do with the lack of options elsewhere as the size of undiscovered reserves.

Quote of the Week

"Predicting peak oil is almost like predicting peak technology — an exercise, in other words, that to him seems inherently small-minded. Even absurd."

-- Paul Siegle, Chevron vice president for deepwater exploration

Commentary: The Dangers of Certitude

By Steve Andrews and Randy Udall

In northwestern Colorado the Yampa River is the last wild, undammed major tributary of the Colorado River, which makes it a favorite for river runners. One morning in 1965 two experienced rafters floated around a corner above Warm Springs Rapid. Historically, this had been just a minor riffle in a river full of major rapids. But the previous evening a flash flood had choked the Yampa with rocks and boulders, creating what is today, at high water, one of the ten toughest river rapids in the West. Taken by complete surprise, the two shocked rafters flipped in a monstrous hole they had never anticipated; one died.

Today, every river rat who rafts the Yampa knows about Warm Springs—the rapid that changed the face of a river overnight. No one takes it for granted. Hold that thought, and we'll come back to it in a moment.

This past August, your ASPO-USA conference co-chairs (Jim Baldauf and Steve Andrews) traveled to Houston to meet the editors and publishers of *World Oil* magazine and *Oil and Gas Investor* magazine, plus the editor of the *Oil & Gas Journal* and an experienced energy beat writer for the Houston Chronicle. We wanted to solicit their broad views on peak oil and invite them to cover the conference October 18th- 20th.

One question we asked these journalists was "what do you see as the greatest weaknesses in the peak oil argument?" Half of their response—"the resource is larger than the pessimists think"—likely will not surprise you. The other half may: "It's the sense of certainty conveyed about many of the issues."

Our hosts had good working familiarity with history of peak oil forecasting, including the flawed early calls. With decades in the business, they had also seen dozens if not hundreds of oil and gas price forecasts miss the mark. In short, experience has taught them to be mistrust forecasts *about anything*. Soothsaying strikes these writers as a smug and dangerous practice.

Having followed the peak oil discussion for twenty years, we share this concern. In our opinion, excessive certitude may be the soft underbelly of the peak oil movement.

Certitude: "the state of being or feeling certain." Sometimes certitude stems from blind optimism. Who can forget the catch-phrase of the early 1960s that nuclear power would eventually be "too cheap to meter." Other times certitude issues from a lack of imagination—think France's Maginot Line. But most often certitude fails to recognize that history itself is profoundly unpredictable. In 1990, no energy forecaster could have foreseen double-digit growth in Chinese demand for oil, or the collapse of the former Soviet Union.

Even someone as smug, arrogant, and self-righteous as former Defense Secretary Donald Rumsfeld understood the dangers of hubris. In one famous soliloquy he noted, "There are some things we do not know. But there are also unknown unknowns, the ones we don't know we don't know."

If forecasting is a slippery business, the flip side is that predictions can be useful, and it takes personal courage to go out on a limb. It took a considerable degree of courage (backed up by analysis) for M. King Hubbert to forecast in March 1956, over the objections of his bosses, that U.S. oil production would peak around 1970. Recall that this was before any large producing nation had experienced its maximum production and decline. Although history proved Hubbert prescient on the U.S. peak, some energy historians argue today that he was just lucky. Hubbert's forecasts of a world peak around 1995 have not come true, in part because he anticipated but couldn't quantify the impact of numerous technological developments, such as 3D seismic and deepwater drilling. When it comes to predictions, nobody's track record is perfect.

Perhaps the humorous advice about forecasting—"do it early and often"—should be discarded when it comes to peak oil. Our efforts to predict when world oil production will peak sometimes seem tendentious. There is no way to "win" on this question until the peak is visible in the rear view mirror. More importantly, debates on when shift the focus away from the far more important issue: what should we do *now* to mitigate the impacts of peak? It's highly instructive that authors Hirsch, Bezdek and Wendling of "The Peaking of World Oil Production: Impacts, Mitigation & Risk Management" (2005) didn't spend any time forecasting the peak date. They didn't even bother. Instead, their paper tried to underscore a much more important paradigm—that efforts to mitigate the peak of oil production must begin at least a decade before the peak to be most effective.

The peak oil movement could benefit from their example. It's easy to make forecasts. It takes courage, wisdom, and humility to restrain that all too-human impulse. As we survey the field, three key points seem apparent:

- 1) Everyone agrees that peak oil will occur some day, and virtually everyone—from the most to least optimistic—agrees that it will be before 2030-40.
- 2) During the last ten years, peak oil optimists have made a series of erroneous calls. The U.S. Energy Information Administration, the International Energy Agency, Cambridge Energy Research Associates, and the National Petroleum Council have all forecast larger production increases and lower prices for oil and natural gas than have materialized, for a host of reasons. But the high-water mark in wild forecasts may have been the U.S. Geological Survey's 1961 estimate that 590 billion barrels of conventional oil would ultimately be extracted from the U.S. Thirty-seven years past peak, we've yet to produce half that much.
- 3) Shrill forecasts—from any camp—don't sway the undecided. But there's a catch-22 here. As Hirsch and Bezdek pointed out, unless policymakers become convinced that peak oil is imminent—*before it occurs*—the post-peak transition is likely to be very painful.

If forecasts are often futile and shouted warnings often go unheeded, what's a peak oil concernist to do? Maybe the Yampa River offers us a lesson. Today, river runners always scout Warm Springs Rapid before running it. When they hear the roar of cascade, they row to shore, tie-up, then walk along the bank, examining their options, making plans, and discussing contingencies. It's not unusual to spend 30 minutes analyzing the rapid, before climbing back in the boat, cinching down the life jacket straps, and rowing alertly into the violent maelstrom.

In stark contrast, most people in this country (and much of the world) appear blissfully unaware of the emerging peak oil story. While there is general unease afoot about energy, most automobile buyers and manufacturers (to identify but one threatened sector) seem to anticipate only minor changes on down the road. Without a breakthrough in the level of discourse, society could face its own Warm Springs unprepared.

But maybe the way to communicate the threat is with less rather than more shrillness. Maybe less certitude and less hubris—on all sides—would help prevent this critical discussion from becoming trapped in the equivalent of an eddy or, worse, in what river runners call a whirling “maytag hole.”

Steve Andrews and Randy Udall are two of the co-founders of ASPO-USA.