

## MUSINGS FROM THE OIL PATCH

April 29, 2008

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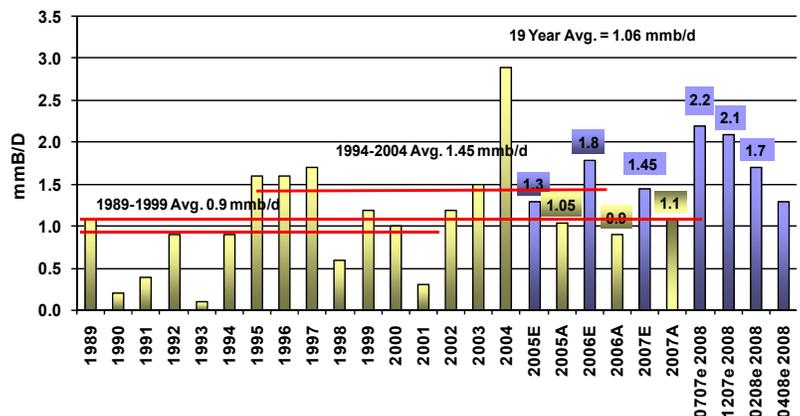
**Note:** *Musings from the Oil Patch* reflects an eclectic collection of stories and analyses dealing with issues and developments within the energy industry that I feel have potentially significant implications for executives operating oilfield service companies. The newsletter currently anticipates a semi-monthly publishing schedule, but periodically the event and news flow may dictate a more frequent schedule. As always, I welcome your comments and observations. Allen Brooks

## Have Crude Oil Prices Destroyed Energy Demand?

**With current crude oil futures prices in the \$118-\$119 per barrel range, it is difficult to remember that barely nine months earlier crude oil futures prices were around \$75**

There has been much talk over the past nine months about the absence of noticeable energy demand destruction as a result of the 54% rise in crude oil prices over that time. With current crude oil futures prices in the \$119-\$120 per barrel range, it is difficult to remember that barely nine months earlier crude oil futures prices were around \$75. During this period, we witnessed the eruption of turmoil in U.S. credit markets to the point they seized up and needed resuscitation by the Federal Reserve. Moreover, the credit market problems in the United States spilled over into credit markets worldwide. The bursting housing bubble in the U.S. was well under way by last summer, although the magnitude and swiftness of the foreclosure tsunami had yet to be quantified or experienced.

**Exhibit 1. IEA's 2008 Demand Forecast Falls Steadily**



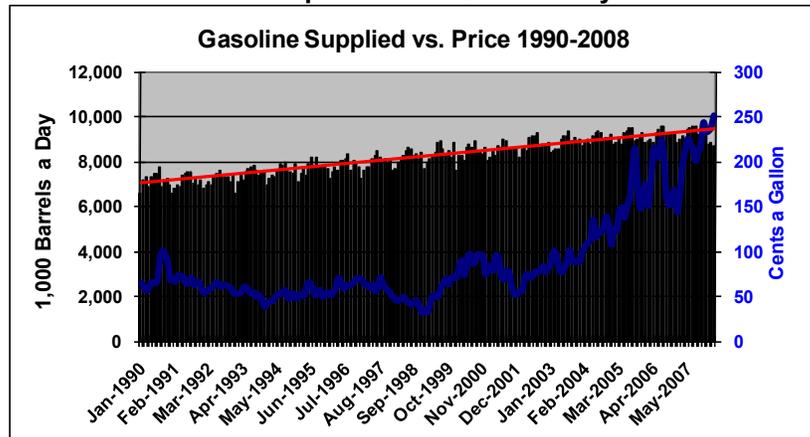
Source: IEA, PPHB

**Gasoline demand is highly volatile on a week to week basis, but over extended time periods discernible trends become evident**

The rapid deceleration of growth in the U.S. and European economies became increasingly evident as 2007 morphed into 2008. As a result, global economic growth forecasts have been lowered and with those reductions, crude oil demand growth was cut, also. Based on its latest monthly forecast, the International Energy Agency's (IEA) 2008 projected increase in global oil demand has been cut almost in half – 1.3 million barrels per day (b/d) versus 2.2 million b/d – since its initial forecast for this year was issued late last summer.

Other traditional measures of demand destruction caused by high oil prices have become more visible in the U.S. weekly gasoline consumption figures issued by the Energy Information Administration (EIA). Gasoline demand is highly volatile on a week to week basis, but over extended time periods discernible trends become evident. For example, if you look at gasoline demand, measured by product supplied to the market, over the 18-year period of 1990 to 2008, despite the sharp rise in gasoline prices over the past few years, there has been a steady upward trend in its consumption.

#### Exhibit 2. Gas Consumption Has Risen Steadily Over Time

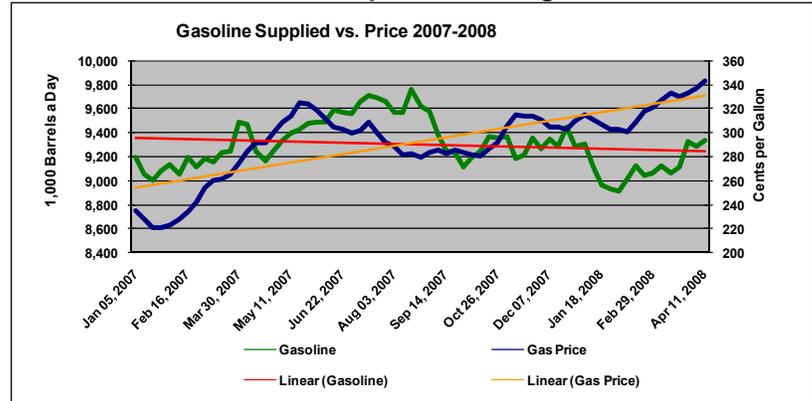


Source: EIA, PPHB

**If you zero in on gasoline use just since the end of last summer to now, there has been a marked decline in consumption**

However, if one looks at gasoline consumption since the start of 2007 to now, there has been a very slight decline although gasoline pump prices have climbed meaningfully during the period. But if you zero in on gasoline use just since the end of last summer to now, there has been a marked decline in consumption, which corresponds more closely to the recent jump in gasoline prices. Of course, there needs to be some credit for gasoline demand destruction attributed to the recent sharp increase in food prices and the lingering fallout from the housing market debacle on American consumer incomes.

**Exhibit 3. Gasoline Consumption Is Falling in Recent Times**

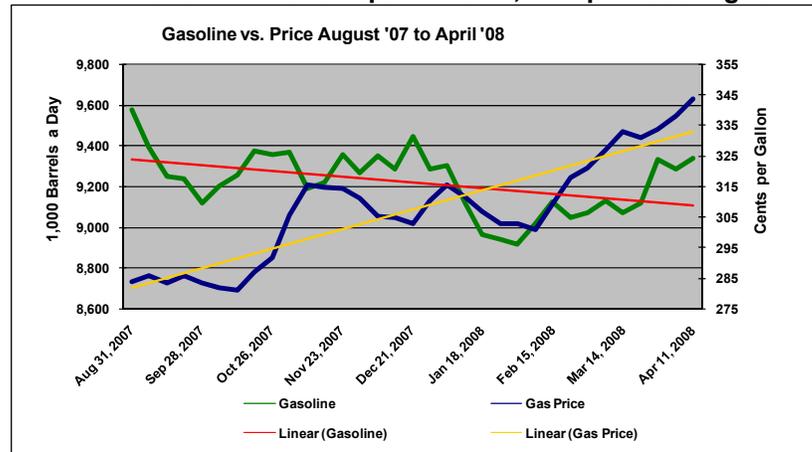


Source: EIA, PPHB

**Weekly gasoline consumption has declined by 2.5%, while at the same time, pump prices for all formulations of regular gasoline have jumped by over 21%**

When we looked at the gasoline demand falloff experienced since the end of August 2007 until mid April of this year, we discovered that weekly gasoline consumption has declined by 2.5%. At the same time, pump prices for all formulations of regular gasoline have jumped by over 21% and they show no signs of stopping their advance. While the media has focused on how bad this rise in gasoline prices has been and the toll it is taking on consumer budgets, we thought we would look at the historical record to see if there were other periods when this magnitude of gasoline price increases has occurred to see whether there was a similar demand drop.

**Exhibit 4. Gasoline Consumption Down; Pump Prices Higher**



Source: EIA, PPHB

**In the 2004-05 period, gasoline prices rose by 21.6%, yet gasoline consumption only fell by 1.9%**

We were surprised to see that there had been another period during the past 15 years when gasoline prices have risen as much on a percentage basis as in recent months, yet gasoline consumption fell off less than in the current period. That time was in the 2004-05 period when gasoline prices rose by 21.6%, yet gasoline consumption only fell by 1.9%.

**Exhibit 5. Tie Between Gas Consumption And Prices Not Clear**

	Last Week August	Mid-Month April	Change
1993-94	7,629 * 106.2 **	7,187 * 102.8 **	-5.8% -3.2%
1994-95	7,750 116.1	7,543 116.3	-2.7% 0.2%
1995-96	8,206 116.3	7,804 128.7	-4.9% 10.7%
1996-97	8,369 124.2	7,791 124.4	-6.9% 0.2%
1997-98	8,695 128.8	8,031 107.2	-7.6% -16.8%
1998-99	8,607 105.3	7,878 117.9	-8.5% 12.0%
1999-00	8,810 127.3	8,557 148.6	-2.9% 16.7%
2000-01	8,960 152.1	8,438 154.0	-5.8% 1.2%
2001-02	8,612 152.3	8,840 144.6	2.6% -5.1%
2002-03	9,135 143.6	8,640 163.9	-5.4% 14.1%
2003-04	9,337 178.6	8,973 185.3	-3.9% 3.8%
2004-05	9,267 190.9	9,089 232.1	-1.9% 21.6%
2005-06	9,406 311.7	9,100 282.8	-3.3% -9.3%
2006-07	9,610 289.3	9,247 292.2	-3.8% 1.0%
2007-08	9,577 284.0	9,338 343.8	-2.5% 21.1%

**Note:**

\* Gasoline consumption in 1,000s of barrels

\*\* Gasoline pump price in cents per gallon

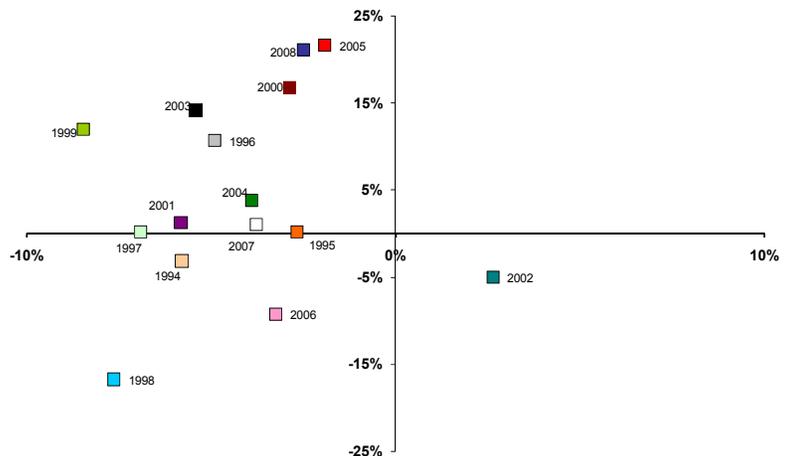
Source: EIA, PPHB

Based on the data in Exhibit 5, there have been five other periods

**In several periods, modestly smaller percentage price hikes compared to the current environment generated greater consumption cutbacks than now**

since 1993 when gasoline prices rose by double-digit percentage gains and gasoline consumption also fell. Interestingly, in several of those periods, modestly smaller percentage price hikes compared to the current environment generated greater consumption cutbacks than now. It is also instructive to note that in two periods in the 1990s – 1994-95 and 1996-97 – gasoline prices were essentially unchanged from August to the following April yet gasoline consumption fell. It was down slightly more in percentage terms in 1994-95 than now and more than two and a half times the current rate of decline in 1996-97. Our conclusion is that multiple factors play a role in gasoline consumption. The magnitude of the price increase is one factor, but the level from which price hikes occur has to be another consideration along with the overall health of the American economy. The presentation of the data in Exhibit 6 in a scatter plot shows more clearly the relationship between changes in pump prices and gasoline demand growth. In the scatter diagram, the X-axis (the horizontal one) measures the change in gasoline consumption while the Y-axis (the vertical one) shows the change in pump prices.

**Exhibit 6. Gasoline Consumption and Prices Vary Widely**



Source: EIA, PPHB

**It is our belief that energy demand is being destroyed as a result of the recent and relentless rise in oil prices**

It is our belief that energy demand is being destroyed as a result of the recent and relentless rise in oil prices, which are taking a toll on consumer and business budgets. We were intrigued to receive an email newsletter from a commodity trader in Chicago who had actually done some field research to satisfy himself about the demand destruction he was convinced is happening. This trader, accompanied by a buddy, ventured out to the Hinsdale Oasis, which is a gas station/truck stop/food court that extends over the I-294 highway just outside of Chicago. In his email, he chronicled his conversations with customers of this facility about how high gasoline and diesel fuel prices have impacted their lives and livelihoods.

He first met a Chicago area school teacher who, along with her teacher-husband, was selling their home in order to move closer to

**Due to the rising cost of diesel fuel, they had been forced to sell six of the trucks back to the dealer at a financial loss**

her teaching job. She lives in the far southwestern suburbs of Chicago and teaches on the far northwest side. According to her, the cost of fuel for that commute, coupled with her husband's commute, was making it very difficult for them to make ends meet. She was further frustrated by their inability to sell their house as a result of the conditions in the housing and credit markets.

Next he met the owners of a 30-year old, family-owned trucking firm. During the trucking boom of a few years ago, the firm had expanded its business to 10 trucks and employed at the peak 30 drivers. Due to the rising cost of diesel fuel, they had been forced to sell six of the trucks back to the dealer at a financial loss. He also talked to another truck driver who told him that his firm had held a meeting that very day to discuss ways to conserve fuel because, as they said, if things didn't change the company would soon be having to lay off drivers. (We already know that many interstate trucking firms, besides trying to tack on fuel surcharges to their bills, have instructed their drivers to drive slowly to conserve fuel even though it adds hours to the length of trips.)

**This vanguard of consumers will adapt to higher fuel prices, but the changes they embrace are likely to permanently erode energy demand**

The trader talked to other independent truckers who were putting their rigs up for sale and to the owners of a small food service company that was adding fuel surcharges to its bills, but were finding customers refusing to pay. He met some truck drivers who were having their pay cut because of fuel costs, but at least they were still working. Clearly all of this research is anecdotal. However, it reflects the leading edge of the pain and suffering confronting average working Americans. This vanguard of consumers will adapt to higher fuel prices, but the changes they embrace are likely to permanently erode energy demand. Capturing the magnitude of that conservation is difficult as the study of the relationship between gasoline prices and consumption changes shows. But we should not lose sight of the fact that the energy conservation train has left the station and where it winds up and how quickly it gets there is unknown. Its trip, however, will impact the future of the global energy industry.

## **Alberta Grants Royalty Break As Money Goes Elsewhere**

**The new royalty rules are designed to help offset the cost of drilling these very expensive, high productivity wells that were hard hit by the October royalty regime**

The Alberta government has announced two new royalty programs to encourage the development of deep and more prolific oil and gas wells, responding to the industry's criticism of the province's October 2007 royalty regime. The new royalty rules are designed to help offset the cost of drilling these very expensive, high productivity wells that were hit hard by the October royalty regime. The October royalty regime seemed to skew the industry's focus toward drilling the easy and more marginal wells. The new deep drilling royalty plan does not depend on a well being successful; therefore it should have its intended impact on overall drilling activity.

Since, depending upon the well depth, a large portion of the cost of drilling these wells can be offset by the royalty relief on production

**The extension into Saskatchewan of the U.S.'s North Dakota Bakken play and the new gas shale discoveries in northern British Columbia are sucking industry reinvestment funds from Alberta**

the plan should stimulate additional drilling in Alberta. This is important because a significant unintended consequence of its October 2007 royalty action was to encourage producers to shift their budgets across the province's borders to new exploration and development opportunities. The extension into Saskatchewan of the U.S.'s North Dakota Bakken play and the new gas shale discoveries in northern British Columbia are sucking industry reinvestment funds from Alberta. While government officials contend the new royalty incentives are not in response to these trends, we understand from sources that the government has become very concerned about the impact of its prior actions on Alberta's oilfield activity. This is another sign that economic returns will influence where E&P dollars are spent.

**\$130 or \$80 Per Barrel Oil – What's Next For Oil Prices?**

**What does this volatility suggest about the future course of oil prices?**

Investors want to know. After coming within a hair of touching \$120 per barrel for crude oil (\$119.90 intraday high on April 22, 2008) crude oil futures prices fell back to below \$115 intraday merely two days later. They rallied last Friday as geopolitical concerns surfaced in Nigeria and the waters off the coast of Iran. So how could oil futures prices move so quickly in such a short time? And what does this volatility suggest about the future course of oil prices? Inquiring minds want to know.

To borrow a phrase from that great political mastermind, James Carville, "it's the dollar, stupid!" Increasingly, investors and commodity traders point to the deterioration of the value of the U.S. dollar as the primary cause of the escalation in crude oil futures prices. Thus many investors believe that the root cause of high oil prices, and possibly high food prices too, has been the aggressive creation of money by the Federal Reserve in its attempt to stave off a recession in the United States. While the Federal Reserve under the leadership of Alan Greenspan fostered an investment culture based on low interest rates that helped reduce the risk premium in the stock and bond markets, today's Federal Reserve is more focused on pumping liquidity into faltering credit markets.

**Many financial analysts and investors have watched the growth of the U.S. money supply with great fear about its impact on inflation**

Mr. Greenspan's successor, Dr. Ben S. Bernanke, has been made famous for his statement that he believed dropping money from a helicopter to help prevent recessions was a worthwhile effort. What that does, however, is to debase the value of the dollar by spurring inflationary pressures in the U.S. economy. Many financial analysts and investors have watched the growth of the U.S. money supply with great fear about its impact on inflation. Unfortunately, their view has been obscured by the decision of the Federal Reserve to stop reporting the M3 measure of money supply in March 2006.

Since 1971 the Federal Reserve has published data about our money supply utilizing three different definitions, moving from the most restrictive to the broadest classification. The most restrictive definition, M1, includes all currency in circulation, travelers' checks,

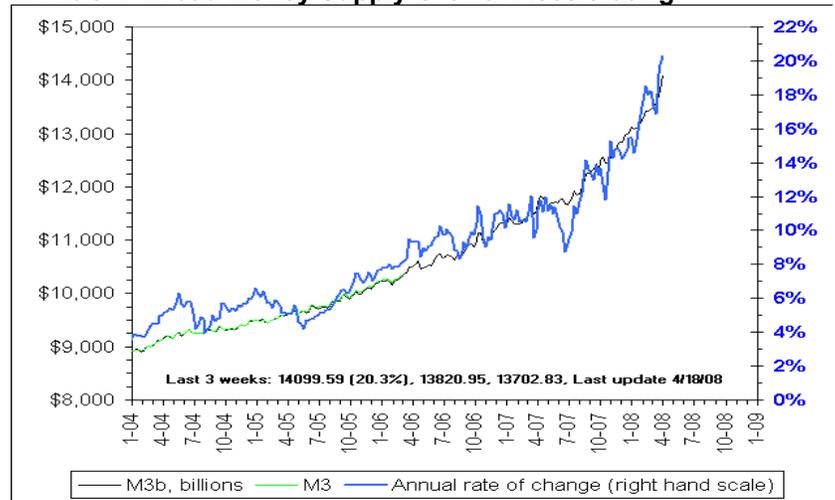
**The broadest definition of money supply was M3**

demand deposits (checking accounts) and other demand deposits against which checks can be written. The next broader level of money supply is M2 that includes all of M1 plus savings accounts, time deposits under \$100,000 and balances in retail money-market mutual funds. The broadest definition of money supply was M3 that included all of M2 plus balances in institutional money-market mutual funds, large denomination time deposits, repurchase agreements between banks and Eurodollars held by U.S. residents at foreign branches of U.S. banks and at all banks in the United Kingdom and Canada.

**The financial analysts have been very suspicious of the decision by the Federal Reserve to stop reporting M3 data in order to save money**

The financial analysts have been very suspicious of the decision by the Federal Reserve to stop reporting M3 data in order to save money and because most of its components are already published. As one financial columnist put it, "When did you ever hear of the U.S. government trying to save money and shutting down a program?" Several financial analysts have begun reporting estimated M3 data from the various components reported by the Federal Reserve and using a proxy to measure Eurodollars. One of the better known among the economists/financial analysts is John Williams who publishes the Shadow Government Statistics (shadowstats.com) newsletter. Mr. Williams is famous for his publication of a consumer price index (CPI) that is based on the old definition of the government's index before it introduced subjective value adjustments to account for supposed quality improvements. Mr. Williams' measure has been reporting a sharply higher monthly CPI figure than the government.

**Exhibit 7. Broad Money Supply Growth Accelerating**

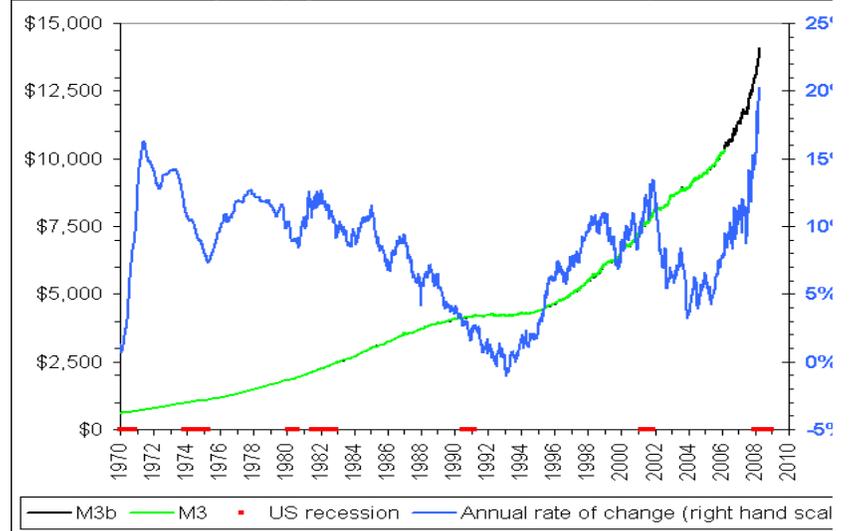


Source: Shadowstats.com

Exhibit 7 shows the rate of growth of M3, reported by Mr. Williams, in recent weeks while Exhibit 8 shows the long term record of M3 and its recent proxy measure, while Exhibit 9 shows the global money supply expansion. In Exhibit 10 we show the relationship between the broader measures of money supply and inflation, both

the government's version and Mr. Williams' version. These charts are all a prelude for the chart in Exhibit 11 that relates the growth in M3 with the price of crude oil. Clearly, there appears to be a fairly strong correlation between the accelerating growth of M3 in recent years and the sharp rise in crude oil prices.

**Exhibit 8. Money supply Growth In Historical Perspective**



Source: Shadowstats.com

**Exhibit 9. Global Money Expanding Rapidly**

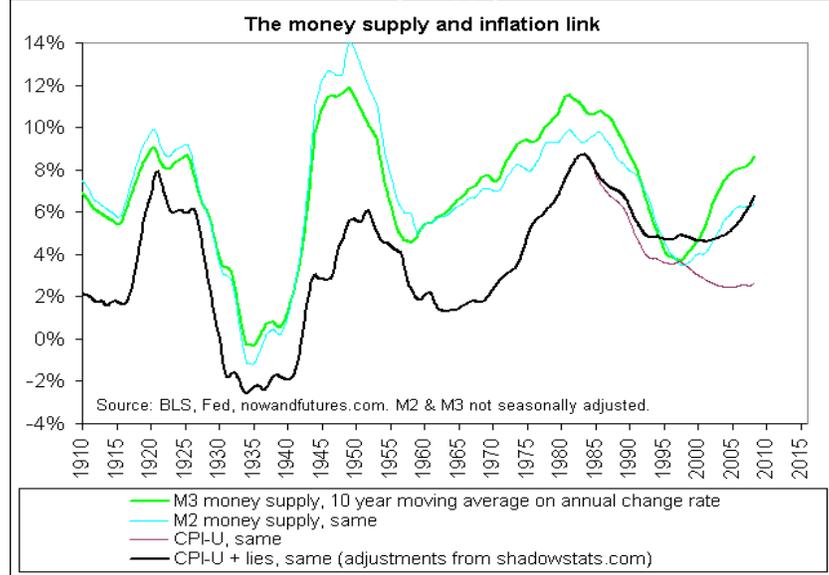


Source: ISI Group  
Source: U.S. Global Investors

**The Euro has become a global currency facilitating trade and commerce among the European bloc of countries and with the balance of the world**

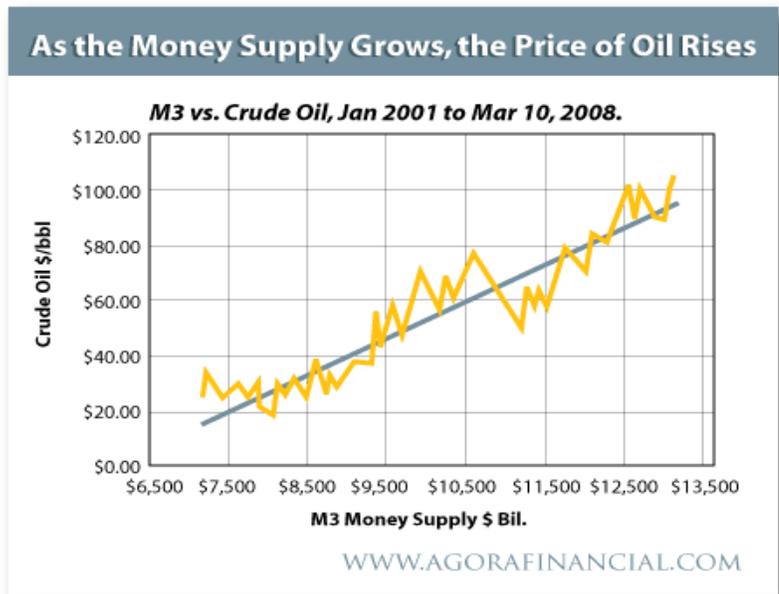
Equally as disturbing as the relationship between money supply growth and crude oil prices is the relationship between global oil prices and the exchange ratio of the U.S. dollar and the Euro. The Euro was created to be the universal currency of the multiple states that joined to form the European Community. Not all the countries voted to become parties to the Euro currency, but most of the continental European countries did agree. Introduced in late 1998, the Euro has become a global currency facilitating trade and commerce among the European bloc of countries and with the

**Exhibit 10. Inflation And Money Supply Growth Are Linked**



Source: Shadowstats.com

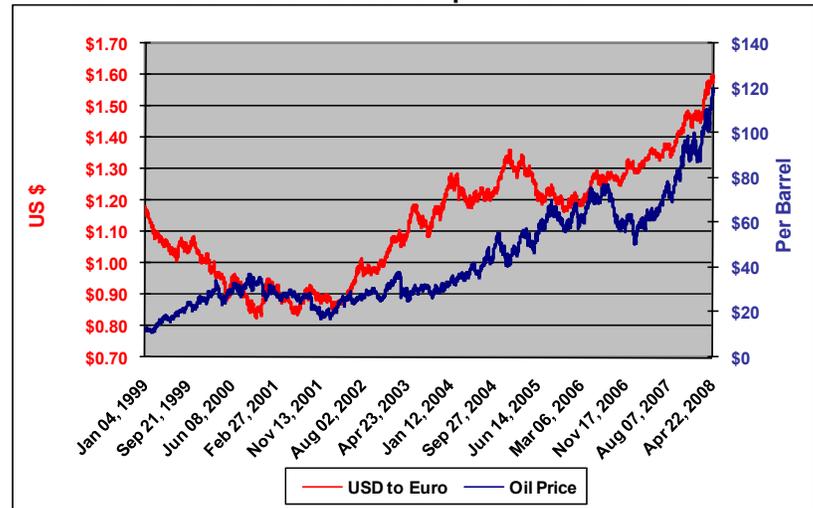
**Exhibit 11. Money Supply Growth Linked to Oil Price Rise**



Source: Agora Financial

**Many of the Middle East countries engage in substantial trade with the Euro bloc countries; they have begun to favor the Euro over the U.S. dollar**

balance of the world. The European bloc has a total population about equal to that of the United States making it a very potent economic entity. Because many of the Middle East countries engage in substantial trade with the Euro bloc countries, they have begun to favor the Euro over the U.S. dollar, which is a reason why the value of the dollar has been falling, even though virtually all the global oil trade is conducted in the U.S. currency.

**Exhibit 12. Dollar/Euro Relationship Drives Oil Prices**

Source: St. Louis Fed, EIA, PPHB

**The soaring value of the Euro relative to the U.S. dollar since 2002 explains some of the sharp rise in crude oil prices**

Exhibit 12 shows the ratio of the U.S. dollar to the Euro since the beginning of 1999 to the futures price for crude oil. The relationship is almost perfect. In the early years, as the value of the Euro versus the U.S. dollar deteriorated, crude oil prices rose. But that trend merely reflected the recovery of oil markets following the 1998 Asian financial crisis. However, notice that once the U.S. dollar to Euro ratio stabilized, oil prices were relatively stable until the value of the U.S. dollar began to weaken. The soaring value of the Euro relative to the U.S. dollar since 2002 explains some of the sharp rise in crude oil prices. In fact, in recent months it has primarily been the weakness in the U.S. dollar that is almost totally responsible for the climb in crude oil prices above \$100 per barrel as all oil measures suggest a weakening in global demand. Until the U.S. dollar stops declining in value and starts to strengthen, the bias in crude oil markets will be for higher prices. But when, and if, the U.S. dollar strengthens, watch out for a huge reversal in both currency and oil markets. In that case, \$80 might be a bottoming point, or maybe even lower, temporarily.

## Saudi Arabia King's Statement Highlights Peak Oil Risk

**Saudi Arabia's King Abdullah has ordered his state oil company to leave some new oil discoveries undeveloped in order to preserve oil wealth in the kingdom for future generations**

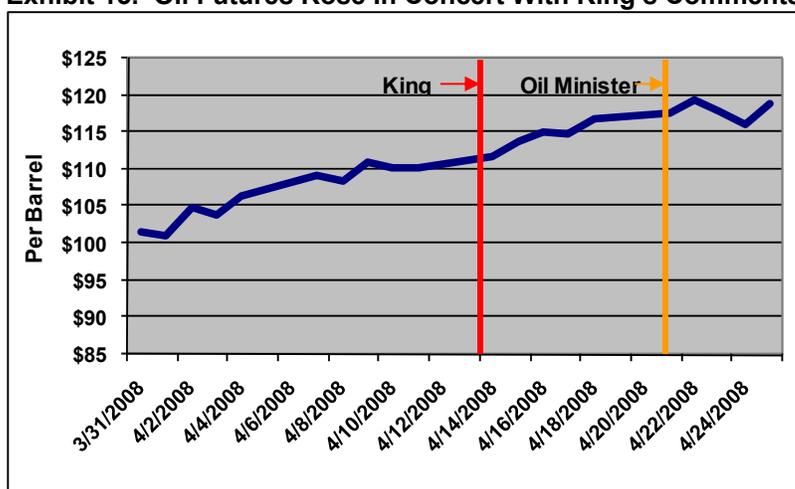
On April 13, the Reuters news agency carried a report from Riyadh to the effect that Saudi Arabia's King Abdullah had ordered his state oil company to leave some new oil discoveries undeveloped in order to preserve oil wealth in the kingdom for future generations. King Abdullah was quoted in the report as having said, "When there were some new finds, I told them, 'no, leave it in the ground, with grace from god, our children need it.'" The import of this statement did not sink in on the media immediately and as a result, was not reported to investors until a few days later.

While the media missed the initial significance of the king's

**Oil Minister Ali Naimi confirmed the king's remarks and intent, which helped drive oil prices near the \$120 per barrel target**

statement, it appears from the movement in crude oil futures prices that once it was reported investors and traders understood. Futures prices had slowed their rapid advance that had begun at the start of April. As can be seen in Exhibit 13, before and then immediately following the date of King Abdullah's comment futures prices were relatively flat. As the media reports began to circulate, the pace of the rise in futures prices accelerated. That advance was further spurred on by comments from Saudi Arabia Oil Minister Ali al-Naimi. He confirmed the king's remarks and intent, which helped drive oil prices near the \$120 per barrel target that many commodity technical analysts were calling a significant marker to establish the next upward move. Unfortunately for the technicians, the futures price came within a dime of touching the target before falling back.

**Exhibit 13. Oil Futures Rose In Concert With King's Comments**



Source: EIA, NYMEX, PPHB

**The plan targets boosting Saudi Arabia's oil production capacity to 12.5 million barrels per day (b/d) by 2009, up some 11% from its current pumping capacity of 11.3 million b/d**

The first real effort by the media to focus on the significance of King Abdullah's statement on limiting oil production capacity growth came in concert with the opening of the 11<sup>th</sup> International Energy Forum in Rome on April 21. At that meeting, Oil Minister Naimi spoke to reporters. At that time, the story line from the media was that the kingdom was not planning any further expansion of its oil production capacity beyond its current investment plan. That plan targets boosting Saudi Arabia's oil production capacity to 12.5 million barrels per day (b/d) by 2009, up some 11% from its current pumping capacity of 11.3 million b/d. The current plan involves spending some \$50 billion to lift the production capacity.

**Ali Nami: "I can assure you unequivocally that the world is not running out of oil"**

While signaling a limit to future production capacity growth, Ali Naimi talked about his government's belief that there are currently sufficient reserves globally to meet the world's energy demands for the next 50 years. He emphasized this point emphatically with his statement, "I can assure you unequivocally that the world is not running out of oil." But he also was quick to point out that the greatest danger to satisfying global energy needs is a lack of investment.

**Gone from the king's statement is the previous boast that Saudi Arabia would increase its production capability to 15 million b/d, which the Saudi government and oil industry officials had said could then be sustained for 50 years**

**The issue that bears potentially greater global concern is the growth worldwide in consumption of alternative fuels**

**It was clear to me that OPEC, which is heavily influenced by Saudi Arabia, is concerned about alternative fuels and what their growing use might do to oil consumption growth**

A few days later, the *Saudi Gazette* reported that the kingdom plans to invest \$90 billion in oil production and refineries over the next five years. That was at the same time the kingdom announced the initial production flowing from the Khursaniyah field, which is slated to reach 300,000 b/d of production within the next 30 days and then climb toward peak production of 500,000 b/d by the end of the year.

King Abdullah's statement carries the seeds of acknowledging the possibility that peak oil production may be within the foreseeable future. Gone from the king's statement is the previous boast that Saudi Arabia would increase its production capability to 15 million b/d, which the Saudi government and oil industry officials had said could then be sustained for 50 years. As people began to assess the implications of the king's statement, the initial question was whether it was a tacit admission that Saudi Arabia has greater challenges in sustaining its existing production due to more rapid depletion of its mature, world-scale oil fields. Equally concerning to Saudi Arabia's oil customers is the rapid growth in the kingdom's domestic consumption and its recently announced plans to enter the steel and smelting businesses – both of which are highly energy intensive. A corollary issue to accelerating decline rates is the possibility that all the easy and less costly oil fields in the kingdom have been discovered and developed.

But the issue that bears potentially greater global concern is the growth worldwide in consumption of alternative fuels. That trend, about which Saudi Arabia has definite views, will impact the future growth rate in demand for oil and gas. As such it is creating confusing market signals and that confusion is forcing Saudi Arabia to take a more conservative view about the development of its energy producing strategy. Should it invest in building greater pumping capacity that might sit idle if global consumption growth slows?

We had the opportunity about a year and a half ago to speak at a private Norwegian investment meeting. On the program with us was an analyst from OPEC who worked on the supply side of its research and forecasting group. He made a presentation about the near-term outlook for oil markets based on OPEC's research and views. We subsequently sat together at dinner and discussed some of these issues. What I found fascinating both in his presentation and our dinner conversation was the number of times the term alternative fuels came up. The slides he showed reflected forecasts that were always qualified by assumptions about the growth in alternative fuel use. It was clear to me from this presentation and conversation that OPEC, which is heavily influenced by Saudi Arabia, is concerned about alternative fuels and what their growing use might do to oil consumption growth.

The Saudi Arabia concerns about biofuels also came out in other recent comments from Ali Naimi. In an interview he said that the growing use of ethanol by the United States and European countries was slowing oil demand growth. As a result, the kingdom is

**Sadad al-Husseini admitted that if the value of the U.S. dollar continued to weaken, then a price of \$130 or \$140 per barrel for crude oil was not out of the question**

beginning to believe that more oil production capacity beyond that already under development is not needed at the present time. Ali Naimi repeated this point in an interview in *Petroleum Argus* reported on by *The Wall Street Journal* where he said, "If you look at projections for demand, it has started going down."

On the morning of April 24, on the CNBC show Squawk Box, Sadad al-Husseini, the former head of exploration and production for Saudi Aramco was interviewed. His comments followed the Saudi Arabian "party" line in that he believes the issue with oil prices is not availability of crude oil but rather a lack of sufficient global refining capacity. When the 'talking heads' tried to zero in on what crude oil and gasoline prices might do in the very near term, he rightly declined to answer because, as he cited, there are too many variables that have nothing to do with the fundamentals of oil supply and demand. Mr. al-Husseini was credited by the CNBC reporters for having told their audience several months ago that the next price target for crude oil was \$120 per barrel, which was almost reached last week. He admitted that if the value of the U.S. dollar continued to weaken, then a price of \$130 or \$140 per barrel for crude oil was not out of the question.

**He acknowledged that China and India (as do many other Asian and Middle Eastern countries) have fuel subsidies but that the financial cost was becoming onerous**

Mr. al-Husseini discussed the falling value of the dollar and its impact on oil prices, but he was quizzed more on the role of subsidies for oil and gas and energy efficiency trends. He acknowledged that China and India (like many other Asian and Middle Eastern countries) have fuel subsidies but that the financial cost was becoming onerous and at some point these countries, and all the others subsidizing fuel purchases, could no longer be able to afford them. At that point these countries would have to address the level of their subsidies that would likely cut the rate of growth of their oil imports and total energy consumption. He pointed out that today China is importing about 4 million b/d and the cost of that action is unsustainable. At \$120 per barrel, China has an annual import bill in excess of \$175 billion.

**What we have to watch out for, and Saudi Arabia and OPEC are certainly watching, is the global impact of alternative fuels on oil demand growth**

So is peak oil a real concern? Maybe like the hoarding of rice currently underway because of consumer reaction to the explosion in grain prices, and in particular rice prices, crude oil may be hoarded by producing countries such as Saudi Arabia who want to have sufficient resources to power their economic development. (There are even signs that Russia may be shifting to that philosophy, too.) If that is the true motivating factor behind King Abdullah's statement, then we are beginning to witness conditions much like the 1970s when OPEC gained its oil market pricing power and flexed its muscles for political purposes. The net result was the emergence of new oil producing regions elsewhere around the world. We are not ready yet to proclaim that Brazil in this decade will be the equivalent of the North Sea of the 1980s, but it certainly is beginning to smell like it. On the other hand, the deteriorating production profile of Indonesia, Mexico and Russia, to name only a few countries, certainly gives pause to that thought. What we have to watch out for, and Saudi Arabia and OPEC are certainly watching,

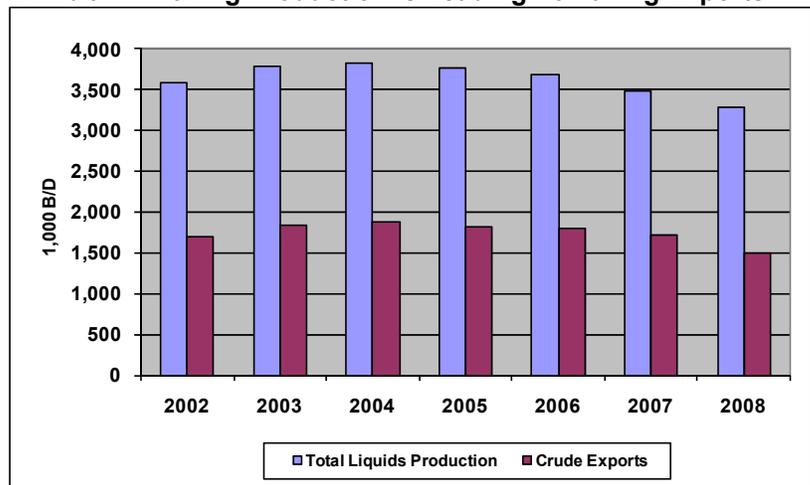
is the global impact of alternative fuels on oil demand growth.

## Mexico and Its Challenge for Restructuring Pemex

**Mexico's oil production has continued to fall in each of the first three months of 2008**

Everyone knows that Mexican oil production has started into a sharper decline due to the rapid falloff in production from the country's primary producing field, Cantarell. According to the most recent production figures from the Mexican government, the country's oil production has continued to fall in each of the first three months of 2008. As of March's production figures, total Mexican production was 3.215 million b/d, down 83,000 b/d from February and 108,000 b/d from January, but more telling is that it is down 384,000 b/d from a year ago.

**Exhibit 14. Falling Production Is Leading To Falling Exports**



Source: BP, Pemex, PPHB

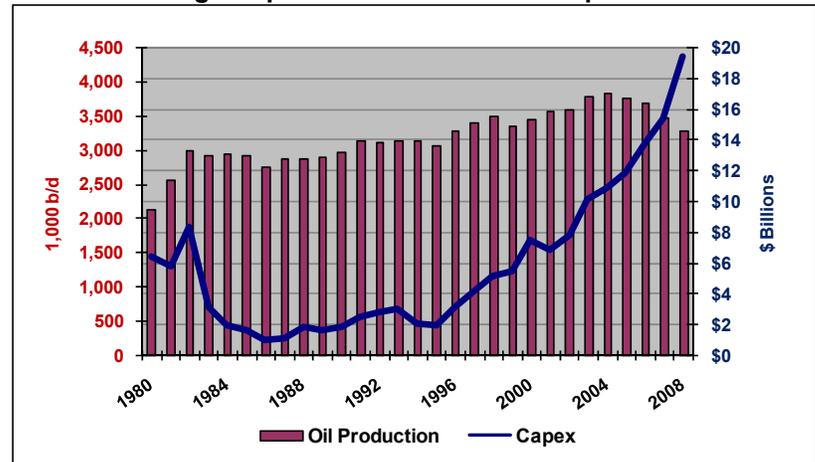
**The first quarter average of 2008's export volume of 1.499 million b/d is 213,000 b/d below the same period in 2007, or a drop of 12.4%**

While the country's oil production is falling, rising global crude oil prices have helped sustain the finances of the state oil company, Pemex. But when we examine the country's oil exports, we find another disturbing trend. While March's exports of 1.628 million b/d is the highest experienced since last November, the first quarter average of 2008's export volume of 1.499 million b/d is 213,000 b/d below the same period in 2007, or a drop of 12.4%. Equally troubling is that gasoline imports continue to rise and currently account for 40% of domestic consumption.

The efforts of the government of President Felipe Calderón to modernize Pemex and open up the domestic oil industry to foreign oil companies who could assist in the development of new resources have run into a roadblock. The roadblock is literal besides figurative. The National Action Party (PAN) that leads the government has presented the plan that has been blocked by representatives of the Party of the Democratic Revolution (PRD), the second largest voting bloc in the Chamber of Deputies and the third largest in the Senate. The PRD is headed by Andrés Manuel López Obrador, the loser to

Calderón in the hotly contested and extremely close 2006 election.

### Exhibit 15. Huge Capex Increases Fail To Stop Decline



Source: BP, Pemex, PPHB

**The plan would enable Pemex to enter into flexible contracts with private firms who would receive payment based on their performance but not from revenues derived from the sale of Mexican crude oil**

Mr. Calderón is proposing a revamp of Pemex that should improve its operations, and hopefully its exploration results, and open up the refining, transport, storage and distribution aspects of the industry to investment from local and foreign firms. The plan would also enable Pemex to enter into flexible contracts with private firms who would receive payment based on their performance but not from revenues derived from the sale of Mexican crude oil. This is an attempt to get around the constitutional ban against foreign oil companies having any ownership in or control over Mexican oil and gas resources. Another key point of the plan is to allow the addition of independent oil experts to Pemex's board to help in guiding the company forward, especially in this challenging period.

**Whether the Mexican people feel motivated to approve the actions required remains to be seen, but the slowing U.S. economy is having an impact on the Mexican economy**

After the plan was presented to the legislators, the PRD moved to block any action on the bill and literally shut down the legislature for about two weeks. This shut down also caused the government to have to abandon a welcoming ceremony for the President of India. While the legislature has been road blocked, the two sides have tried to work out a plan to consider the proposed bill. In the past few days it appears a compromise has been worked out that involves a 71 day debate starting in July instead of the 120 day debate the opposition wanted. The terms of the debate have not been spelled out, but the agreement led to the opposition legislators leaving the congressional halls and removing the "Shut Down" and other protest signs. Of course they signaled their sense of victory with the agreement. With time of the essence – Mexico's known oil reserves are projected to only last for another nine years – the modernization of Pemex needs to happen soon. Whether the Mexican people feel motivated to approve the actions required remains to be seen, but the slowing U.S. economy is having an impact on the Mexican economy. Maybe that pressure will be the key to the politicians developing a workable agreement to open up Pemex and the Mexican oil industry to outside technology and finances.

## Coincidence? Russia Oil Peaks as Industry Creator Dies

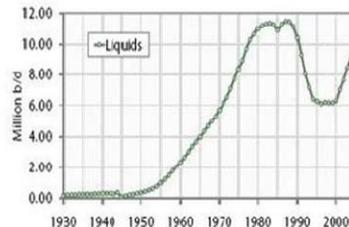
Multiple information sources recently reported that Russia's oil production appears to have peaked late last year ending a dramatic production recovery from the chaotic period associated with the fall of the former Soviet Union. If true, that poses a major challenge for global oil supplies as the rapid growth in Russia's production and its oil exports over the past few years have been a key ingredient behind the rise in non-OPEC oil supplies. Absent additional future Russian oil production, the world will need to find either another producing region or boost its call on OPEC output.

**From over 11 million b/d in 1989, the country's production collapsed to 6 million b/d about six years later**

The role that Russia has played in the global oil market is demonstrated by the history of its production since 1955, the peak experienced in the late 1980s and the recovery that commenced in the mid 1990s. From over 11 million b/d in 1989, the country's production collapsed to 6 million b/d about six years later. The restructuring of the industry that coincided with the privatization of the companies and the opening of the market to western oil companies, and in particular the western oil service companies, production began to recover. Since these developments, Russia's production has steadily risen over the past 11 years to slightly over 10 million b/d last year.

### Exhibit 16. Russia Oil Production Appears to Have Peaked

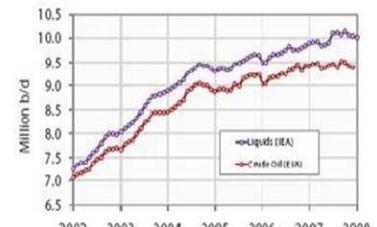
Chart 68: Russia Production 1955 - 2005



Source: ASPO Ireland & BP Statistical Review

Source: [ASPO-USA.com](http://ASPO-USA.com)

Chart 69: Russia Production January 2002 - January 2008



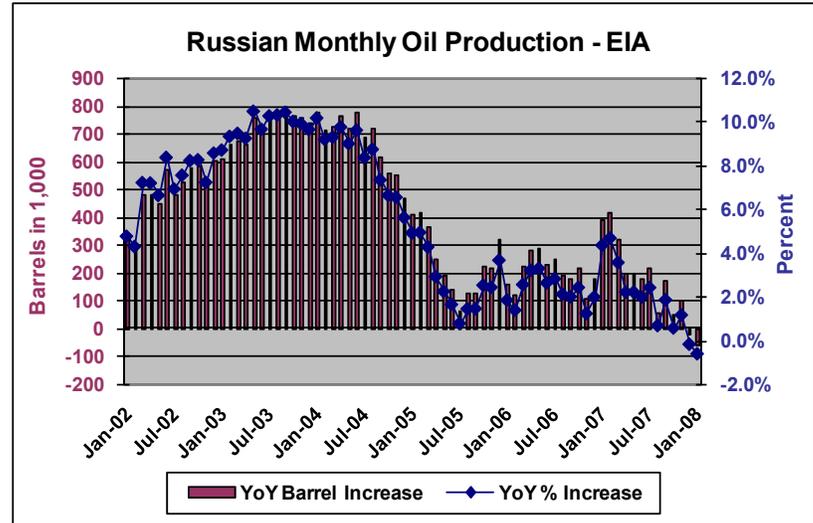
Source: Energy Information Administration & International Energy Agency

**The latest monthly production figures supplied by the Russian government support the conclusion that production peaked last year**

However, the latest monthly production figures supplied by the Russian government support the conclusion that production peaked last year as these recent numbers show production down from last year. There are still many questions about whose production figures to believe, but virtually all the reported and estimated numbers from the forecasting agencies point to the same negative trend. Even state-controlled oil companies are now suggesting that their production is not growing and will be down for the year. The declining production trend is unmistakable in Exhibit 17 based on EIA data. As the chart shows, not only has volume growth declined, but it has turned negative in recent months.

This recent performance is in sharp contrast to the monthly growth experienced in 2003 through 2005. Although the monthly production has turned negative, the possibility was clear beginning in the

Exhibit 17. Peak Oil Production Became Obvious In 2006-2007



Source: EIA, PPHB

**Many observers were lulled into thinking that the abnormal monthly gains reported for several months in the first half of 2007 were signaling a breakout from the 2006 period of weak monthly production increases**

**After boasting about having become the globe's largest oil producer last year, Russia may be falling back more rapidly than anyone anticipated**

second half of 2007. But many observers were lulled into thinking that the abnormal monthly gains reported for several months in the first half of 2007 were signaling a breakout from the 2006 period of weak monthly production increases. It was the large monthly gains during early 2007 that encouraged both outsiders and Russian officials to speculate on how important the country's oil supplies would be to the world market. In fact, until recently, the IEA was forecasting 300,000 b/d production growth for 2008 and then an equal volume of increase for each year through 2011.

That production growth would increase the role Russia would play in world oil markets and in turn boost its geopolitical power. No longer would Russia be merely a military factor in the global power balance, but the country would become more of an economic power, too. Although Russia still has a powerful and growing stranglehold on Western Europe's natural gas markets, the country's position in the world's oil markets may be starting to slip. After boasting about having become the globe's largest oil producer last year, Russia may be falling back more rapidly than anyone anticipated. Unfortunately, the most important person in the history of the Russian oil industry recently passed away and is no longer available to inspire current industry figures.

In July 1942, a young mining engineer, Nikolai Baibokov, was summoned to meet with Joseph Stalin, the supreme leader of the Soviet Union. At that time, Mr. Stalin was preoccupied with fighting off Hitler's 6<sup>th</sup> Army that was advancing on Stalingrad. But what Mr. Stalin knew was the risk his country was facing should the Germans overrun the city and secure their position to the south in the Caucasus near the strategic oil fields close to the city of Baku. He ordered Mr. Baibokov, under penalty of death, to prevent the German's from getting the oil should they get there. But he also

**Mr. Baibokov directed the oil workers to pump cement down the wells to plug them**

threatened him that after the Russians defeated the Germans, if he couldn't restart the oil production he would be shot. With that motivation, Mr. Baibokov directed the oil workers to pump cement down the wells to plug them, which would have forced the Germans to drill for months to reopen the wells had they secured the fields, and to remove and hide the valves in the field's oil gathering pipelines.

**Mr. Baibokov who came up with the idea of building a pipeline under the ice of Lake Ladoga to bring gasoline to the besieged city**

In 1943, Mr. Stalin wanted to breakout his troops from the two-year siege at Leningrad (now St. Petersburg) but they needed fuel, and lots of it. He summoned Mr. Baibokov who came up with the idea of building a pipeline under the ice of Lake Ladoga to bring gasoline to the besieged city and the idea worked. Given that track record, in 1944, Mr. Stalin appointed Mr. Baibokov as Peoples' Commissar of the Soviet Union and made him responsible for the entire national oil industry.

**Under Mr. Baibokov, Soviet geologists and engineers began drilling in eastern Siberia and discovered a number of large fields – in fact more production than the country could consume**

Following the war, Mr. Stalin massed tanks along the southern border of the USSR opposite Iran with a plan to seize the oil and gas resources of that country if the domestic oil industry couldn't produce the supplies necessary to feed the growing Soviet economy. Mr. Baibokov persuaded Mr. Stalin that the vast spaces of the Soviet Union offered the potential for additional discoveries of oil and gas. This led to Russia's postwar oil and natural gas development in Siberia. Under Mr. Baibokov, Soviet geologists and engineers began drilling in eastern Siberia and discovered a number of large fields – in fact more production than the country could consume, so the development efforts would leapfrog smaller fields in favor of developing the more massive and least costly fields. These smaller fields skipped in the 1950s and 1960s are the ones the industry has been developing in recent years. Under Mr. Baibokov, Russian oilfield technology developed important innovations such as improved seamless drill pipe and downhole turbo drilling motors.

**He has counseled Russia's leader, Vladimir Putin, that the privatization initiatives of the 1990s were ruinous and that he should increase the level of central planning in the Russian economy and especially in the energy industry**

Mr. Baibokov was appointed to lead Gosplan, the Soviet central planning agency, in 1955 by the country's new leader, Nikita Khrushchev. But because Mr. Baibokov disagreed with Mr. Khrushchev's efforts to diminish the reputation of Joseph Stalin who had died in 1953, he was dismissed from his post in 1957 for insubordination. In 1965, Leonid Brezhnev reappointed Mr. Baibokov to run Gosplan, a post he held until he was dismissed by Mikhail Gorbachev in 1985. In the past few years, he has counseled Russia's leader, Vladimir Putin, that the privatization initiatives of the 1990s were ruinous and that he should increase the level of central planning in the Russian economy and especially in the energy industry. Does his advice sound like the recent track record of the Russian government under Mr. Putin's leadership? According to an announcement on March 31, 2008, Mr. Baibokov died of pneumonia. So will the new Russian leader, with Mr. Putin acting as his prime minister, heed the advice of Mr. Baibokov? The answer to that question may represent another of those events that will reshape global oil markets.

## Alberta Wonders Whether A Role For Nuclear Power Exists

**Nuclear power has been proposed as a way to help develop the large oil sands resources in northern Alberta while limiting or reducing associated greenhouse-gas emissions**

The Alberta government has appointed a panel of scientific, business and economic experts to study the pros and cons of nuclear power in the province. This effort is designed to address the proposed \$10 billion investment in nuclear power by Bruce Power that is opposed by environmentalists. Nuclear power has been proposed as a way to help develop the large oil sands resources in northern Alberta while limiting or reducing associated greenhouse-gas emissions. In addition, the province has suffered from tight supplies of electricity as the oil boom has boosted the province's population and economic activity.

The mandate for the panel is to gather as much objective information and data about nuclear energy as possible, but not to make a policy recommendation. The panel will study environmental, health and safety issues, waste management, comparisons of nuclear energy with other power generation technologies and Alberta's future electricity needs. It will also examine social issues and concerns related to nuclear energy, and review Alberta's energy strategy and whether nuclear power plays a role.

**The development of Alberta's oil sands is producing major changes for the province: socially, economically and environmentally**

The development of Alberta's oil sands is producing major changes for the province: socially, economically and environmentally. The oil sands developments are becoming increasingly more expensive due to the labor and materials challenges. In addition, the energy required to produce the synthetic oil is becoming increasingly more expensive, and because the issues that need to be overcome to enable the construction of the Mackenzie Valley gas pipeline haven't been resolved, the oil sands producers are seeking a less costly – in the long run - supply of energy and nuclear could be that source. This possibility has led to the Bruce Power proposal to build up to four reactors in the Peace River area of Northern Alberta with the first unit slated to commence operations in 2017. What the panel presents will set the parameters for the political debate that will ensue.

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