

## MUSINGS FROM THE OIL PATCH

February 7, 2006

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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

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### Inflation an Overlooked Emerging Trend

**The U.S. economy is now 50% more efficient in its energy use than it was in the 1970s**

One of the great mysteries of the past several years has been the low level of U.S. inflation in light of the sharp upward trend in oil and gas prices. The explanation offered by economists and analysts is that the U.S. economy has become much more efficient in its use of energy and therefore can withstand high oil and gas prices without falling into a recession. Statistics reveal that the U.S. economy is now 50% more efficient in its energy use than it was in the 1970s.

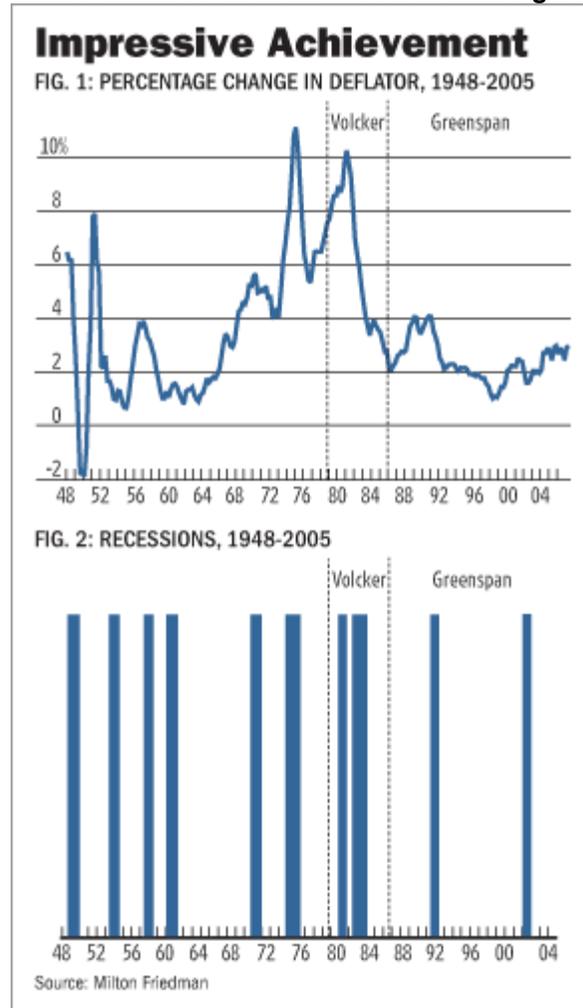
In reading an op-ed article in *The Wall Street Journal* written by Milton Friedman as a tribute to the retirement of Federal Reserve Chairman Alan Greenspan, we were intrigued by his contrasting the performance of the Federal Reserve (Fed) in its first 70 years of existence with that of the Greenspan era. During those 70 years, Friedman says, "the Fed did more harm than good, presiding over inflation in two World Wars, converting a moderate recession into the great depression, and then, in the 1970s, producing the most serious peacetime inflation in our nation's history."

**In the Greenspan era, inflation only averaged 2.4%**

Friedman pointed out that from the end of World War II to the Paul Volker era as head of the Fed in the late 1970s, inflation (as measured by the GDP deflator) averaged 3.7% per year. In the Greenspan era, inflation only averaged 2.4%. Friedman also was impressed by the lack of volatility in the inflation rate, as historically it ranged from a low of -2% to a high of over 11%, while under Greenspan it ranged from a low of 1% to a high of 4%.

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Exhibit 1. Inflation and Recessions Throughout Time



Source: WSJ

**There was an uptick in oil prices in 1956 that seems to coincide with the 1957 peak in the change in inflation that proceeded the 1958 recession**

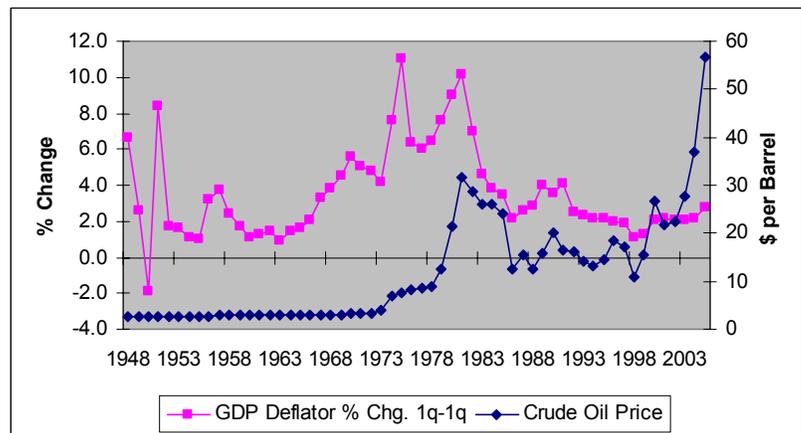
We thought it would be interesting to look at the relationship between the inflation index and crude oil prices over this same time period. The data presented in Exhibit 2 reflects the average price paid for oil in the United States and the first quarter to the prior year first quarter percentage change in the GDP implicit price deflator, indexed to 2000 dollars. One interesting observation was that during the long period of low oil prices, there was an uptick in 1956 that seems to coincide with the 1957 peak in the change in inflation that proceeded the 1958 recession. We suspect, however, that the oil price increase may relate more to the Middle East political fallout from the 1956 Israeli-Egypt war that led to the shutting of the Suez Canal and eventually to the landing of U.S. troops in Lebanon to help tame the unrest there.

One can also see clearly the rise in oil prices that coincided with the explosion in inflation in the 1970s and then the collapse in oil prices

**Crude oil prices started to climb in 1999, as inflation rebounded from an extremely low level**

and inflation in the early to mid 1980s. One then notices that during the balance of the 1980s and the 1990s, inflation was relatively stable (Friedman's observation), and that oil prices seemed to trade in a channel, but with a reasonable amount of volatility. Crude oil prices started to climb in 1999, as inflation rebounded from an extremely low level. However, oil prices, after a brief correction, started their long climb toward the \$60-plus level, but notice that there has been an increase in the rate of inflation in early 2005, which we believe has been largely ignored by many observers.

**Exhibit 2. Crude Oil Prices vs. Inflation**



Source: EIA, Economagic, PPHB

**Recent economic statistics for 2005 suggest that the benign economic environment many economists and analysts are embracing may be changing**

The rate of inflation in December seems to have increased at a faster annualized rate than the average for all of 2005. Some of the most recent economic statistics for 2005, such as the performance of worker productivity and labor costs, suggests that the benign economic environment many economists and analysts are embracing may be changing. The U.S. Labor Department reported that worker productivity rose 2.7% in 2005, while worker costs climbed by 2.4%. For the final three months of 2005, productivity actually fell by 0.6% while labor costs rose by 2.4%. Usually, labor costs are passed on in final goods prices that could lead to a further uptick in inflation in future economic performance.

**Given the oil price data, can inflation remain as low as it has in recent years?**

While we cannot prove anything about inflation and oil prices, we are left with the visual that the climb in oil prices that occurred in the 1970s and which coincided with a period of rapid inflation, compared to the even sharper recent climb in oil prices with barely budging inflation, at least until the last data point. We understand the argument that globalization has contributed to reduced U.S. consumer prices, but much of it occurred in a world of low-cost commodities that has changed dramatically in the last several years. Given the oil price data, can inflation remain as low as it has in recent years? If inflation does ramp up, how will the Fed deal with it in their interest rate policies and what will be the impact on economic activity, both in the U.S. and Asia? As a friend of ours said recently, "We are living in the most uncertain world since the 1970s."

## A Momentous End to January and Start of February

There are always certain dates on the calendar that impact the stock market. December 31 is always important, not only for investment fund performance measurement, but also for determining taxable gains or losses for income tax purposes for individuals. The end of each quarter is always important for investment performance as is the month-end day, but usually the latter is the least important.

**During the month of January, the crosscurrents in the energy commodity markets were truly reflected**

Last week contained both the end of the month of January, a very profitable month for energy investments, and President Bush's State of the Union address that contained a remarkable change in his view of the energy landscape. During January, the crosscurrents in the energy commodity markets were truly reflected in the market.

For the month, crude oil futures rose 3.07% while natural gas futures fell by 15.53%. One would have expected the month's mixed performance to have undermined the attractiveness of energy investments. However, that was not the case as the Philadelphia Oil Service Index (OSX) climbed 21.6% and the AMEX Oil Index (XOI) was up 15.8%. These strong performances were contrasted against the lackluster results of the broader stock market - the S+P 500 (-0.74%) and the Dow Jones Industrial Index (-0.80%).

**On Monday of last week, the energy stocks jumped as ExxonMobil reported record fourth quarter earnings of over \$10 billion**

On Monday of last week, energy stocks jumped as ExxonMobil (XOM-NYSE) reported record fourth quarter earnings of over \$10 billion, and said in its conference call with investors and analysts that it planned to spend more money on exploration and development in 2006. That outlook, coupled with continued strong earnings reports from oilfield service companies, boosted the OSX to a record high. The index climbed 7.30 points, or 3.4% for the day.

### Exhibit 3. A Roller Coaster Ride for the OSX



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Source: Yahoo Finance, PPHB

Not surprisingly, on Tuesday, the energy stocks experienced some profit taking, but most indices recovered up to about 75% of their

**President Bush delivered his State of the Union address in which he discussed the country's "addiction to oil."**

initial losses. That night President Bush delivered his State of the Union address in which he discussed the country's "addiction to oil." He also talked about the need to wean the country off its Middle East oil consumption, and to do that he wants to increase the use of "green fuels." One has to wonder if Bush, an oil man and former oil-state governor, was the only president who could effectively promote alternative fuel use. It is much like the Red-baiter, President Richard Nixon, who was the only president who could have established relations with China. Could George Bush's rhetoric mark the start of the new era for energy?

Wednesday, in reaction to the lack of any support from President Bush in his speech about drilling in the Alaskan National Wildlife Refuge (ANWR), or opening up more federal land and/or offshore acreage, investors sold energy stocks. President Bush, in addressing the U.S. energy situation, talked about the need to develop clean coal, increase the use of nuclear power and ethanol from woodchips, stalks and switch grass. The last initiative actually received two lines in the speech as President Bush said, "Our goal is to make this new kind of ethanol practical and competitive within six years." At the same time, increased discussion about oil industry windfall profits taxes and how these incremental government revenues could be directed to developing new energy technology or helping with social problems and the government's finances probably further encouraged investors to dump energy stocks. From the market open that day, the OSX dropped 9.38 points to its intraday low, before closing off 4.2% for the day.

**On Thursday morning, Punxsutawney Phil saw his shadow signaling a longer winter**

On Thursday morning, Punxsutawney Phil saw his shadow signaling a longer winter and scurried back for an additional six weeks of sleep. Of course, after the winter weather for most of the past 60 days, investors probably are hoping for spring or fall weather rather than another six weeks of this winter weather. Energy stocks continued to slide as profit-taking seemed to become uppermost in the attitudes of investors.

**Exhibit 4. Oil Stock Prices Slide Last Week**



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Source: Yahoo Finance, PPHB

<http://finance.yahoo.com/>

**Increased stock price volatility reflects uncertainty about the near-term outlook for energy markets**

By Friday, energy stocks rallied a little, but the question is whether that is merely a temporary bounce before further profit-taking occurs. It was clear that investors were uncertain whether to continue to harvest profits or view the sharp price correction of the previous several trading sessions as a buying opportunity. The OSX was barely up (+0.6%) for the day from Thursday's closing price. However, from that Thursday close to Friday's low was a 1.2% drop, compared to a 2.2% increase to the intraday high. This volatility reflects uncertainty about the near-term outlook for energy markets.

## Punxsutawney Phil Calls Time Out

**By seeing his shadow, Punxsutawney Phil scared himself back into hiding for another six weeks of winter hibernation**

On the morning of February 2, the world's foremost weather forecasting groundhog, Punxsutawney Phil, crawled out of his den at Gobblers' Knob in Punxsutawney, Pennsylvania and called for an end to the spring-like weather gripping the country. By seeing his shadow, Punxsutawney Phil scared himself back into hiding for another six weeks of winter hibernation.

### Exhibit 5. The Master Weather Forecaster at Work



**Arctic winter weather from Canada will now dip down into the Midwest and northeast regions, bringing back real winter weather**

Right on schedule, the pattern of the jet stream that drives much of the weather experienced across the United States is beginning to change. After having spent much of this winter flowing in a straight line across the northern part of the country and blocking the usual periodic incursions of frigid weather from Canada, the jet stream is set to resume its typical winter pattern of a lazy zigzag across the states. This means that arctic winter weather from Canada will now dip down into the Midwest and northeast regions, bringing back **real** winter weather.

**Exhibit 6. The New Weather Pattern Allows More Cold Air In**



**February might not be quite as kind to lovers of warm winter weather**

According to Paul Knight, a senior lecturer in meteorology at Penn State University and Pennsylvania’s state climatologist, the winter of 2005-6 will rank as one of the top five warmest on record. However, he predicts February might not be quite as kind to lovers of warm winter weather. Mr. Knight cautions the public that “While there are clear indications that February will not be as balmy as January, there are no immediate signs of bitter chill returning.”

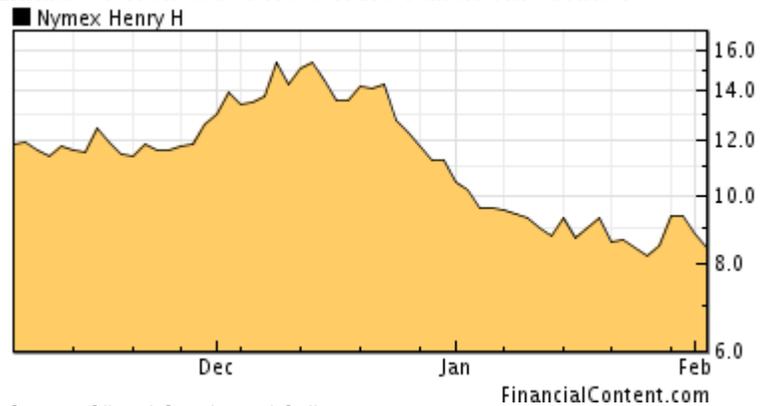
**Exhibit 7. A More Normal Winter Pattern To Prevail Soon**



The warmth of this winter has taken its toll on natural gas prices in the United States sending gas futures prices down sharply between their high in early December due to the early blast of cold weather to current levels. Natural gas futures prices traded on the New York

Mercantile Exchange (NYMEX) have fallen from \$15.32 at the close on December 13, to \$8.61 at the end of business on February 3, or a decline of 44%.

#### Exhibit 8. How Gas Prices Have Fallen This Winter



Source: Oil and Gas Journal Online

FinancialContent.com

**Weather officials at NOAA have yet to determine if this has been the warmest winter on record**

Even though weather officials at the National Oceanic and Atmospheric Administration (NOAA) have yet to determine if this has been the warmest winter on record, Michael Halpert, a meteorologist with NOAA says, "It's certainly going to be right up there." A story prepared by the Associated Press recorded just how warm this winter has been across the country. It was the warmest January on record in Oklahoma and South Dakota, and barely missed the record in Iowa. It was the warmest January for Minneapolis and St. Paul, a city known for its Winter Carnival that saw ice sculptures melting and breaking up almost as fast as they were carved.

Last month was the second-warmest January on record in Maine and Milwaukee; the third warmest in Memphis and Detroit; and the fourth warmest in New York City. The average temperature in Houston was eight degrees above normal, and our winters are relatively warm. With winter officially at its mid-point, the big question is what does the balance of winter hold for temperatures? Prospects are not encouraging for traders and gas producers.

**Residential natural gas customers appear to be using an average of 12.5% less this winter than last**

While many investors and commodity traders are focused on the impact this warm weather is having on energy demand, they may miss observations by gas utilities that demand, adjusted for the warmer weather, is down. According to California's Pacific Gas & Electric executives, their customers used less natural gas during November and December than they did in the comparable months in 2004. Residential natural gas customers appear to be using an average of 12.5% less this winter than last.

According to Natural Gas Intelligence's monthly *Bidweek Survey*, published last week, natural gas price indexes for February dropped an average of \$2.53 per million Btu, or 25% lower than January's levels across the country. A comment from a utility gas buyer in the South summed up the situation. "We have our storage (withdrawals)

**Are these reports isolated events? Or are they an early sign of consumers reacting to high gas prices and adjusting their consumption?**

charted each year, and this is probably the most we've had (in storage) at this point in years." He reported that this situation is so bad that the company has elected to sell a package of indexed baseload gas coming under a winter term deal in February so it will be able to use more storage during the month. Since the sale will be at the same index, there will be a wash with respect to any potential profit or loss from the transaction. Are these reports isolated events? Or are they an early sign of consumers reacting to high gas prices and adjusting their consumption? Stayed tuned.

## China Pushing Smaller Cars to Save Oil

**A nationwide repeal of restrictions on smaller, more economical cars has been called for by China**

A nationwide repeal of restrictions on smaller, more economical cars has been called for by China. The government would like to see the bans lifted by the end of March. At the moment, at least 84 cities in China have banned small cars from their streets. The rationales for these bans have ranged from concern over noise and air pollution to poor power and safety records and even to their less attractive appearance. But it looks like economics may be winning the day over these concerns. As oil prices stay high and China struggles to control its oil consumption growth and greenhouse gas emissions, the role of small cars is growing in importance.

**The automobile population in China nearly tripled between 2000 and 2005**

China's love-affair with the automobile is a recent phenomenon. According to data from China's National Statistic Bureau, the automobile population in China nearly tripled between 2000 and 2005. The automobile fleet increased from 6.25 million cars to 17 million. The fuel to power this vehicle fleet is accounting for upwards of one-third of China's oil imports. The growth in oil consumption has been helped by the poor fuel efficiency of the early Chinese-made vehicles. Those vehicles manufactured before 2001 generally consume 20%-30% more fuel than the autos made by foreign manufacturers, according to the China Automobile Technology and Research Center.

**The Chinese standards are "bottom heavy," meaning that they are designed to force greater efficiency improvement among the heavier vehicles in the fleet**

To try to curb its oil consumption habit, China enacted new fuel economy standards in late 2004. The new standards are slightly more stringent than U.S. regulations, but they are less stringent than those of the European Union and Japan. The Chinese standards are "bottom heavy," meaning that they are designed to force greater efficiency improvement among the heavier vehicles in the fleet. According to the World Resources Institute, only about 4% of sport utility vehicles (SUVs) and minivans sold in China meet the 2005 fuel efficiency standards.

If enforcement of these fuel efficiency standards continues, foreign automobile manufacturers may have to readjust their plans to introduce smaller, more fuel efficient models. The China Association of Automobile Manufacturers says that cars with engine capacities of less than 1.6 liters accounted for 66.1% of total sales of domestically produced passenger vehicles during the first 11 months of 2005. This is up from 62.5% of fleet sales in 2004.

**It is encouraging to see that China is trying to address its runaway oil demand**

The Chinese government is moving forward with further initiatives to encourage the growth of these smaller and more fuel efficient autos. A new auto consumption tax is being enacted that will reduce the tax on low-emission vehicles and raise taxes on high-emission vehicles. Other government initiatives involve having lower parking fees for small cars, increasing their use in the country's taxi fleets and providing lower-priced fuel for these small cars. The trick to making these initiatives work, however, is their enactment and enforcement. China will also need to tighten up the definitions of "economical" and "low-emission" because they need to be consistent with the other initiatives for vehicle safety, etc. The government also has not announced the details on enforcement and the penalties for non-compliance with the new rules. But it is encouraging to see that China is trying to address its runaway oil demand. Their success in this effort could alter the slope of forecaster projections on China's energy consumption and its oil import needs.

## Pandering Politicians a Concern

**Politicians continue to exhort their constituents to believe that one of the inalienable rights of an American is low gasoline prices**

The Senate Judiciary Committee held hearings last Wednesday on the subject of competition within the oil industry, but in reality it was merely a stage to launch attacks on the oil industry over its huge profits in the face of continued high gasoline prices. Politicians continue to exhort their constituents to believe that one of the inalienable rights of an American is low gasoline prices. To politicians, it is unconscionable that big oil companies can make big profits – or maybe even make any profits. Oil companies making profits have to be doing something dishonest – or possibly illegal. As Senator Arlen Specter (R-Pa.), head of the committee, put it, "I am somewhere between impressed and astounded by these profits, and it raises big questions about whether something needs to be done in the merger and acquisitions field."

**The public always wants to see executives they believe are ripping off the public in pictures with their right hand raised**

The oil industry continues to demonstrate inept public relations skills in their handling of the issue of high gasoline prices. The Judiciary Committee requested an appearance at this hearing by executives of six of the major oil and refining companies, but all begged off citing the lack of adequate notice (only four days notice was provided). Many said that they would make themselves available to the committee or its staff at a later date. Of course, Specter, in pandering to the public, has threatened to subpoena the executives for the next committee hearing at the end of February. You can be sure that at that hearing the executives will be sworn in, in contrast to their November 2005 hearing. The public always wants to see executives they believe are ripping off the public in pictures with their right hand raised.

The six oil companies summoned include those controlling a substantial share of the domestic refining industry. The companies include: Shell Oil Company (RDS.A-NYSE), BP America Inc. (BP-NYSE), ConocoPhillips (COP-NYSE), ExxonMobil, Chevron Corp. (CVX-NYSE) and Valero Energy Corp. (VLO-NYSE). It will be

**CITGO has now established programs to supply heating oil to low-income communities in Boston, New York City, Maine and Rhode Island at discounts of up to 40%**

interesting to see whether an invitation is issued to CITGO, the wholly-owned subsidiary of Venezuela.

CITGO would provide Senate Democrats an opportunity to irritate President Bush, while cementing their pre-election credentials as friends of Joe Q. Public. Last October, 12 U.S. Senators sent a letter to nine major oil companies, asking them to donate part of their record profits to help poor Americans faced with large increases in their heating bills this winter. Only one company – CITGO – responded. CITGO has now established programs to supply heating oil to low-income communities in Boston, New York City, Maine and Rhode Island at discounts of up to 40%. For some Democrats, a side-benefit of a CITGO appearance would be the media attention to the association that anti-war protester Cindy Sheehan has with Venezuela's President Hugo Chavez, an Administration irritant.

Continued high oil prices, coupled with the recently reported fourth quarter of 2005 earnings results of the major oil companies (ExxonMobil reported over \$10 billion in profits, the largest ever recorded by any corporation), will further fan the flames of windfall profits tax proposals. An Op-ed piece authored by Mark Weisbrot and Dean Baker, co-directors of the Center for Economic and Policy Research, and published by at least two newspapers (the *Duluth News Tribune* and the *Monterey Country Herald*), argued that a windfall profits tax is acceptable because the profits being earned today are based on investments the companies made when oil prices were only a fraction of the price of oil today, and it would not deter further investment in new oil and gas reserves.

As Weisbrot and Baker wrote, "The main economic argument put forth against such a tax is that it would discourage oil companies from further exploration and development. But a tax on current windfall profits would be unlikely to have such an impact. Oil was less than \$25 a barrel in 2002, and less than \$15 a barrel as recently as 1998 – as compared to \$62 today. Yet oil companies found it profitable to invest in the production that we see today when they expected prices well under half of what they have turned out to be. So a temporary excess profits tax would still leave them much richer than if there had not been this unexpected surge in oil prices."

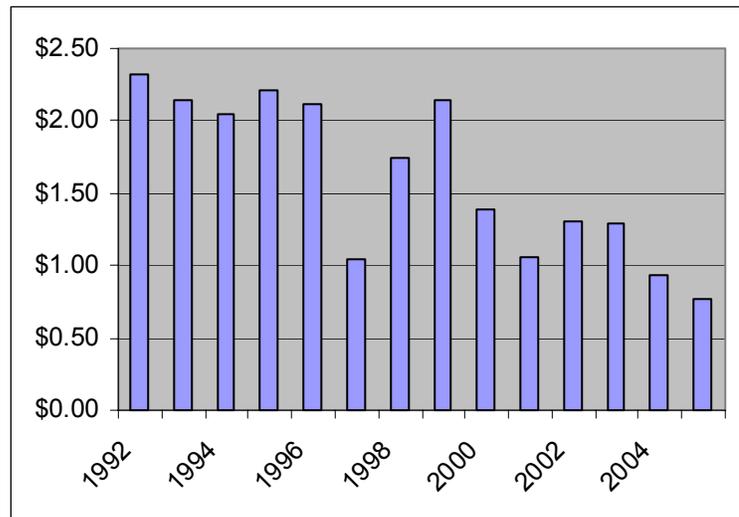
**I have personally heard a senior executive of a major oil company admit that certain ex-post adjustments to contract terms would have to be considered fair**

The difficult thing with the above analysis is that I have personally heard a senior executive of a major oil company admit that certain ex-post adjustments to contract terms would have to be considered fair. He admitted that even after certain changes, the rates of return earned on the projects would still be outstanding and well above anything ever initially imagined. We do not believe that this individual's view is fully representative of oil industry executives, however, the existence, and acceptance, of this view suggests that the camel may be able to get its nose under the tent. From that point forward, sustaining profitability and growing earnings in this industry will become an even greater challenge than in the past. That will do nothing but erode the valuation of the industry's companies.

**ExxonMobil in 2005 only reinvested about \$0.76 for every dollar they returned to shareholders in the form of net stock buybacks and dividends**

What may be a greater problem for the oil industry is the relatively weak increase in exploration and capital spending compared to the robust growth in earnings. Floyd Norris of *The New York Times* wrote a column on the sluggish spending of ExxonMobil in response to high profits. We have previously focused on this problem and Exhibit 9 shows most dramatically how ExxonMobil in 2005 only reinvested about \$0.76 for every dollar they returned to shareholders in the form of net stock buybacks and dividends. This ratio compares with the days in the mid 1990s when then Exxon invested over \$2 for every dollar of shareholder distribution.

**Exhibit 9. ExxonMobil's Reinvestment Rate Continues to Fall**



Source: ExxonMobil, PPHB

**Does the deterioration in ExxonMobil's investment to distribution ratio reflect the curse of size, the ultra-conservatism of management, or a lack of quality investment opportunities?**

The key question is whether the deterioration in ExxonMobil's investment to distribution ratio reflects the curse of size, the ultra-conservatism of management, or a lack of quality investment opportunities? We would like to see this issue explored at the next session of congressional hearings, rather than speeches about gasoline pump prices. Although, even with that subject, ExxonMobil has created a controversy within the industry with its forecast of zero gasoline growth to 2025 for the United States compared to the Energy Information Agency's 1.2% per year growth projection. This lower forecast underlies ExxonMobil's view that the United States does not need to build any new refineries, but rather can get by de-bottlenecking existing refineries. Late February could prove to be an interesting time for the oil industry.

## Davos Audience Hears Scary Oil Price Scenarios

At one session of the World Economic Forum held a week ago at the Swiss resort of Davos, two investors discussed the outlook for high oil prices. One participant was George Soros, the billionaire hedge fund, commodities and currency speculator, who talked about the

**Longer term, investor George Soros is less frightened about the oil market due to the growth of new global oil supplies**

tightness of the global oil market and the near-term risk of a serious geopolitical event touching off a spike in oil prices. But longer term, Soros is less frightened about the market due to the growth of new global oil supplies. Obviously, Soros buys into the Cambridge Energy Research Associates' (CERA) view of robust oil supply growth during the second half of this decade that will expand the global oil supply cushion and ease world oil prices.

**Under a scenario for the fall of the House of Saud, crude oil prices could climb to \$262 per barrel**

The other investor was Bill Browder, the head of the \$4 billion Moscow-based Hermitage fund, which climbed over 80% last year and is up almost 1800% over the past decade. Mr. Browder and his analysts developed six scenarios for future oil prices based on possible geopolitical triggering events. They used these scenarios to develop regression equations, based on historic oil price moves in response to past geopolitical events, to predict where oil prices might go.

The scariest scenario, but least likely to occur, is for the fall of the House of Saud. Under that scenario, crude oil prices could climb to \$262 per barrel. It is almost impossible to imagine a world with oil prices this high because of the social and economic devastation it would bring. Mr. Browder believes a more realistic scenario, and one that appears to be playing out at the present time, is an oil embargo declared by Iran, similar to what it did in 1979. That eventuality could result in more than a doubling of current oil price to \$131 per barrel.

**We are even more convinced that people are totally focused on the supply side of the oil market equation**

The other scenarios Mr. Browder laid out include an oil embargo by Venezuela's Hugo Chavez sending oil prices to \$111 per barrel, a civil war in Nigeria that jumps prices to \$98 a barrel, unrest and violence in Algeria taking prices up to \$79 per barrel and major attacks by the insurgency on Iraq's oil infrastructure pushing prices to \$88 a barrel. From the outside, it is hard to determine exactly how the regression analysis was prepared. Take it from one who has worked for years with numbers, the art of data selection can influence the outcome of purely mathematical exercises. This analysis is especially challenging with certain of the scenarios since they seem farfetched, such as the Chavez embargo. We were interested in the Algerian scenario since you seldom hear anything mentioned about it.

After hearing about this session at Davos, we are even more convinced that people are totally focused on the supply side of the oil market equation. We think people would be better served to pay more attention to the underlying trends on the demand side since that may be where the ugly surprise develops.

## Venezuela: Falling Production but Growing Reserves

Venezuela appears to be playing politics with its hydrocarbon reserves in the face of continued problems with its production. As the sixth-largest oil producer in the world, but facing the prospect of

**Venezuela's energy and oil ministry has boosted the country's estimate of hydrocarbon reserves**

not being able to produce to its OPEC quota, Venezuela needs to strengthen its bargaining position within the organization. Prospects are that the March OPEC meeting will be dealing with a production cut, and how that reduction is handled could hurt Venezuela. With an improved reserve position, albeit offset somewhat by a weaker production profile, Venezuela's hand should be stronger going into the March meeting.

According to Jorge Luis Sanchez, the president of national gas regulator Enagas, Venezuela's energy and oil ministry has boosted the country's estimate of hydrocarbon reserves. Venezuela now has some 502 billion barrels (Bb) of proved, probable and possible crude oil reserves, and 426 trillion cubic feet (Tcf) of natural gas reserves.

Last year, Venezuela listed 300 Bb in total reserves, including about 230 Bb of bitumen from the Orinoco oil belt. According to a source within the national oil company, Petroleos de Venezuela S. A. (PdVSA), who spoke to a reporter for BNamericas news service, the increase in crude oil reserves came as a result of increased exploration in the Orinoco Belt and the classification of bitumen as crude. That change has added hundreds of millions of barrels of reserves, but how significant the change is will depend on the recovery factor.

**Venezuela is promoting the use of natural gas in the domestic market as a way to substitute for oil in power generation, refining and other industrial uses that would allow greater oil exports**

With respect to natural gas, total reserves are now estimated to be up to 426 Tcf from the 190 Tcf estimated in 2004. The new estimate reflects proven, probable, possible and resources. According to Sanchez, "In terms of gas, these reserves would take us from number eight to number four (in the world ranking of gas producers), right between Saudi Arabia and Qatar." With this larger gas reserve estimate, Venezuela is promoting the use of natural gas in the domestic market as a way to substitute for oil in power generation, refining and other industrial uses that would allow greater oil exports. According to Mr. Sanchez, "We are using gas to leverage industrialization and for diversification of markets." He added that China could receive more petroleum fuels freed up for export by increased use of domestic gas.

**The underlying oil production problems seem to be related to inadequate investment**

To us, this strategy suggests that the reported problems Venezuela is having in sustaining, or increasing, its crude oil production, may be addressed by trying to free up more oil by substituting gas. Unfortunately, that doesn't change the underlying oil production problems that seem to be related to inadequate investment since PdVSA has become the mainstay of financial support for Hugo Chavez's social program both at home and throughout Latin America. At some point, Venezuela may have to face the challenge of stepping up investment – but maybe there are enough thirsty consumers around the globe who will be willing to fund this investment. Therein lays the difficulty for western oil companies who are being forced to accept unilaterally revised petroleum contracts.

## Kremlin Guards Go High Tech

**The Kremlin Regiment donned new uniforms last week based on space-age technologies**

The Kremlin Regiment, the elite military unit responsible for guarding the top Russian officials and the Kremlin itself, donned new uniforms last week based on space-age technologies. The Kremlin Regiment was founded April 8, 1936, taking over protection of the Kremlin when the school for training military officers who had previously provided protection was moved. The Kremlin Regiment is under the direct control of the President of Russia. It is housed in the historic Arsenal building commissioned by Peter the Great in 1701.

### Exhibit 10. Kremlin Regiment During Warmer Times



Source: [www.kremlin.ru](http://www.kremlin.ru)

**The material has been tested and shown that it can withstand water for more than 500 hours**

The new uniforms are made from materials developed for the space program. According to Sergei Devyatov, spokesman for the Federal Guard Service, of which the Kremlin Regiment is a part, said that the traditional uniform of felt boots, sheepskin hats and overcoats had been replaced with clothes made from special water-resistant material and lined with thermoplastic fibers originally developed for spacesuits. According to Devyatov, the outer wear “can withstand strong winds, snow, freezing temperatures, and rain. The special membrane fabric is almost 100% waterproof.” He said that the material has been tested and shown that it can withstand water for more than 500 hours (probably longer than a Russian military parade).

While tempted, the uniform's designers elected to stay with the regiment's historical colors of emerald green and cornflower blue rather than spacesuit silver. It's a shame that the new uniforms were not available during the early January bitter cold weather when it would have been truly welcomed. It does appear that practicality is overtaking ceremony.

## Arctic Russian Weather Heads to US

**The Arctic winter weather that gripped Moscow and the rest of Russia in early January has moved and appears headed to the northeast region of the United States this week**

The Arctic winter weather that gripped Moscow and the rest of Russia in early January has moved and appears headed to the northeast region of the United States this week. As we wrote in the last *Musings From the Oil Patch*, Russia was in the grip of a severe cold spell that reportedly caused in excess of 40 deaths in the country, cut gas supplies to the rest of Europe and limited crude oil output. In addition, the cold put a severe strain on Russia's energy supplies (natural gas and electricity) as citizens struggled to keep the temperature in their living quarters tolerable. At the same time, the cold temperatures forced Gazprom (OGZPF.PK) to produce extra gas supplies while cutting back exports to Eastern and Western European customers, although they disclaimed doing the latter.

The supply cutbacks raised further concern among customers, analysts and politicians about Gazprom's ability to be a dependable gas supplier to non-Russian customers. This concern, which had surfaced with the New Year's weekend gas flow shutoff to the Ukraine, continues to be discussed throughout the continent. But from the point of view of the impact of the arctic cold weather on the U.S. natural gas market, the frigid weather heading to the northeast should help buoy gas prices here in coming days.

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After an early blast of winter weather early in December, the U.S. winter has been abnormally warm across almost all regions of the country. But that pattern may be changing – at least for a while. The Russian arctic weather appears to have traveled over the North Pole and into Alaska and Canada. The weather is heading for a weakening jet stream traversing the northern portion of the United States. That increases the likelihood this cold weather will reach the U.S. According to AccuWeather, temperatures by the end of this week should be about eight degrees below normal. While colder than normal temperatures are dredging up visions of a more typical winter, the extended period of above normal weather this winter has boosted oil and natural gas inventories to, or above, the levels of last year. That trend has taken a toll on natural gas prices, which are dependent upon real market forces, as opposed to crude oil prices that are influenced by geopolitical fears.

The impact from the double whammy of Hurricanes Katrina and Rita drove natural gas prices to all-time highs in early December of last year. The loss of additional gas production for an industry still struggling to recover from the infrastructure damage caused by Hurricane Ivan in 2004 proved devastating for natural gas

**Exhibit 11. Russian Arctic Weather Heads to US This Week**

Source: AccuWeather.com

**The absence of more bitter cold weather in Russia suggests the near-term cold bearing down on the Northeast U.S. is destined to be a passing fad**

consumers. As production began to recover from the initial shut-ins following Katrina and Rita, gas prices softened, only to jump back up to record highs when the early winter cold weather arrived and fears of depleted gas storage inventories by the end of the 2005-6 winter heating season caused gas buyers to panic.

As the early December cold weather faded, so did gas prices. Now that the weather services are predicting a blast of arctic weather, gas prices are on the rise. The big question is: Will this new winter weather pattern remain, or are we destined to return to above normal temperatures? The absence of more bitter cold weather in Russia suggests the near-term cold bearing down on the Northeast U.S. is destined to be a passing fad. That is not good news for natural gas prices, but may be for the oil market as Russia's production should rebound after the weather-related reduction.

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