

## MUSINGS FROM THE OIL PATCH

September 6, 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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### Dividends Better than Stock Buybacks?

**Last year, over half the companies in the S&P 500 index repurchased shares**

An article in the August issue of *CFO* magazine discussed the impact of dividends versus stock buybacks as a use of corporate cash flow. Over the past seven quarters, companies making up the Standard & Poor's 500 index spent over \$630 billion buying back their shares. Those repurchases equaled about 5.5% of the total market capitalization of the index as of June 30, 2006. Last year, over half the companies in the index repurchased shares. Eighty companies saw their earnings per share results boosted as their share counts fell by 4% or more.

**Big companies are spending as much on stock buybacks as they are on capital expenditures**

In the fourth quarter of 2005, S&P companies repurchased a record \$104 billion worth of shares, up from the prior quarterly record of \$82 billion. That record was surpassed in the latest quarter as the companies spent \$116 billion, a 43% increase over the comparable 2005 second quarter. Big companies are spending as much on stock buybacks as they are on capital expenditures. They have also increased their dividend payments, but the dividend yield is falling as earnings per share are growing faster. Howard Silverblatt, S&P's senior index analyst, said the volume of stock buybacks is unprecedented. "We've never had this magnitude of buybacks."

According to management consulting firm, Bain & Company, companies use stock buybacks to:

- "Build investor confidence and shareholder loyalty;
  - "Increase earnings per share and return on equity;
  - "Obtain company assets at bargain values;
  - "Boost share price by signaling that the stock is undervalued;
  - "Increase the company's debt-equity ratio through shifts in financing structure;
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- “Offset dilution effects that are caused by the exercising of employee stock options.”

**The advantages of buybacks over dividends include tax advantages for long-term shareholders and less analyst scrutiny**

Interestingly, the Bain people go on to discuss steps in the execution of stock buybacks that raise questions about how they are viewed. According to Bain, the advantages of buybacks over dividends include tax advantages for long-term shareholders and less analyst scrutiny. This last rationale suggests that analysts are less rigorous in examining management pledges versus their actions.

Bain also points out that managements need to manage shareholder and investor opinion, which requires developing a coherent rationale that convinces interested parties in the merit of the buyback program. A reason for this requirement is that investors have learned that buyback announcements often become phantom transactions. That experience has made Wall Street more jaundiced in its view of stock buyback announcements, plus the repurchased shares are seldom cancelled, thus remaining as treasury stock that can be viewed as a potential share overhang.

**The ratio of dividends to earnings (dividend payout) is close to its lowest level since the late 19<sup>th</sup> century**

While stock buybacks appear to be growing, in light of the continuing buildup in cash on corporate balance sheets, dividends aren't nearly as popular. Even after the 2003 tax cuts on capital gains and dividends, the ratio of dividends to earnings (dividend payout) is close to its lowest level since the late 19<sup>th</sup> century. According to Peter Bernstein writing in the CFA Institute's Financial Analyst Journal last spring, the 2005 dividend payout ratio was 29%. Historically, this rate has been much higher. During 1950-1989, it averaged 50% and never went below 38% - its lowest point touched in 1979 when there was a jump in oil earnings. So why are dividends the Rodney Dangerfield of investing?

Stock buybacks are tax deferred unless you sell your shares, in contrast to dividends that are taxed at 15%. Of course that assumes the share price rises to reflect the reduction in share count. Stock buybacks are one-off transactions and don't establish investor expectations of more buybacks. Dividends, on the other hand, establish expectations that can be destroyed should the company ever reduce its cash payout. Wall Street bankers like stock buybacks since they generate transaction fees. Lastly, investors assume that stock buybacks are a better way of boosting the share price, since reducing the number of outstanding shares raises earnings per share.

**Changing demographics and market conditions are creating a large group of investors that are starting to demand more income-producing stocks**

Changing demographics and market conditions are creating a large group of investors that are beginning to demand more income-producing stocks. Even after the Fed has raised short term interest rates 17 times, bond yields are not dramatically superior to solid dividend-paying stocks. One needs to only look at the growing popularity of real estate investment trusts, master limited partnerships and Canadian income trusts to judge the growing demand by investors for increased income. This trend may be

**Since 1926, dividends have accounted for 41.1% of the total return of the S&P 500 index**

driven by Baby Boomers entering or nearing retirement who are re-adjusting their portfolios away from growth stocks and in favor of current income vehicles as they seek more cash for living expenses.

Can establishing or boosting dividend payouts actually help share price performance? According to Standard & Poor's, since 1926, dividends have accounted for 41.1% of the total return of the S&P 500 index. The stock market performance of dividend-paying stocks further confirms the positive benefit of this method of returning cash to shareholders. From Jan. 31, 1972, until Dec. 31, 2005, dividend-paying stocks in the S&P 500 returned an annualized 10.1%, which is six percentage points higher than the annualized return of non-dividend-paying stocks in the index over the same period.

**Companies in the S&P 500 index paying regular dividends returned over 10% annually, compared with just 4% for those that didn't**

The Boston Consulting Group (BCG) recently examined more than 300 cases in which companies announced large dividends or large stock buybacks. The BCG study showed that after two quarters, the dividend announcements had produced a median 23% boost in the company's price to earnings ratio relative to the S&P 500 average. In contrast, the stock buyback group generated a negative 0.6% return over the same time period. According to Eric Olsen, a senior vice president of BCG, "There's very strong statistical evidence that dividends increase P/E multiples. But we haven't seen any evidence that buybacks move P/E multiples."

**The size of a company's dividend is a good predictor of its future earnings**

A study by the Ned Davis Research firm found that from 1940 to 2005, dividend-paying stocks outperformed the overall stock market. Companies in the S&P 500 index paying regular dividends returned over 10% annually, compared with just 4% for those that didn't. The message from this study is that dividends signal management's view of its future. Because dividends are hard to reverse, you don't announce them or boost them unless you feel confident that you can pay them again and again and again. From this perspective, stock buybacks do not carry the same message.

A 2003 study by Clifford A. Asness and Robert D. Arnott, principals of AQR Capital Management and Research Affiliates, respectively, found that the size of a company's dividend is a good predictor of its future earnings. The study showed that the bigger the dividend, the higher the earnings. This conclusion is contrary to common wisdom, which holds that a growth company serves its shareholders best by plowing its earnings back into the business. The rationalization is that dividends force capital discipline on managers.

*The Wall Street Journal* pointed out that in 2003 when the stock market surged, dividend-paying stocks in the S&P 500 index were trounced by non-dividend stocks that were helped by rebounding technology stocks. However, since then the dividend-paying stocks have performed better. In 2005, the dividend-payers in the S&P 500 index posted a total return of 9.3% versus the 8.2% return of the non-dividend-payers. This year, through August 24, the gap widened dramatically as dividend-payers returned 5.1% compared to 0.9% for non-dividend-payers.

**As commodity prices climb, tortoise-like managements quickly morph into hares, usually to the dismay of investors**

Energy companies have been among the lowest dividend payers. The rationale is that the cyclical nature of the energy business dictates that management should always husband cash for the next downturn in the industry's fortunes. The boom-bust nature of this industry has been fostered by the significant spending increases undertaken to add capacity in periods of commodity price upturns just prior to a weakening in demand. However, capital discipline would suggest that companies should be ramping up their capital investment in periods of commodity price weakness when input prices are lower. Moreover, stock buybacks provide the best return for a corporation when its share price is low, not after it has climbed to record highs after three years. As commodity prices climb, tortoise-like managements quickly morph into hares, usually to the disappointment of investors. Maybe dividends and stock buybacks need to be re-thought.

## Connecticut and Energy Conservation

**Once again we are witnessing government's attempt to usurp the role of free markets**

In the cause of energy conservation, Connecticut State Sen. Thomas P. Gaffey (D-Meriden) will introduce a bill into the General Assembly when it reconvenes in January to reduce the superhighway speed limit to 55 miles per hour (mph) from 70. Sen. Gaffey says that cars perform better at 55 mph saving consumers gasoline and thus costs, important in this period of high gasoline prices. Once again we are witnessing government's attempt to usurp the role of free markets in determining how people should live their lives and spend their income.

It is interesting to note that speed alone is not the major cause of traffic accidents, although that is not the primary reason for this new legislation. The major accident problem associated with speed is differential speeds on the same road such as when people driving 70 mph overtake people driving at 50. Addressing this problem is a highway design issue. Reducing speed limits at specific locations is the preferred way to deal with this problem rather than a blanket reduction in highway speed limits.

**With every gallon of gasoline sold in Connecticut, the government takes in about \$0.57 in taxes, or three times more than the average oil-industry profit of about 18 cents**

It is interesting to note how Connecticut and its municipalities are benefiting from higher gasoline prices and the potential reduction in speed limits. With every gallon of gasoline sold in Connecticut, the government takes in about \$0.57 in taxes, or three times more than the average oil-industry profit of about 18 cents. Last year, Connecticut added a sales tax on wholesalers so that gasoline taxes now rise and fall with the movement in gasoline prices. As a result, the state has benefited from the rise in gasoline prices this year. It is also interesting to note that this wholesale tax is not disclosed in the tax information posted at the pump, which generally is considered a deceptive trade practice if done by business, but not by the state.

In the face of reduced highway speeds, drivers are unlikely to observe the lower limit, just as they did not observe the 55-mph limit in the 1970s. So is the reduction in the speed limit merely another

revenue-raising scheme, whereby police are enabled to set speed traps and impose expensive fines at will, the more so now that Connecticut has just enacted a law giving municipalities a share of the revenue generated by traffic tickets? Watch out! Big Brother is not only watching you, he has his hand in your pocket.

## Mexico, the Election and Peak Oil

### Mr. Calderon's election was challenged by Mr. Obrador

In July, Mexico held an election to determine its next president. At issue was whether the people wanted to continue the pro-business, government revamping efforts of current President Vicente Fox by electing Felipe Calderon, or return to its more historic trend with the socialistic former mayor of Mexico City, Andres Manuel Lopez Obrador. In a hotly contested battle, Mr. Calderon narrowly prevailed with a margin of 244,000 votes, or 0.58% of total votes cast. His election was challenged by Mr. Obrador.

On August 28, a court, reviewing the fraud charges over the election results that had ordered a recounting of nine percent (11,839) of the ballot boxes, indicated that most of the fraud charges were being thrown out. Reportedly, Mr. Calderon lost a total of 4,183 votes from his narrow victory margin, but reportedly all the candidates lost votes in the recount. According to a report prepared by the Center for Economic and Policy Research, Mr. Calderon lost 81,080 votes compared to Mr. Obrador's 76,897, resulting in the net loss figure. Given its analysis that at least half the Mexican ballot boxes had either over- or under-counting errors, it believes there are grounds for a total vote recount, something the court has rejected. The court has until September 6 to certify the election.

### Mr. Obrador has urged his supporters to challenge the result with rallies and demonstrations in Mexico City

Since the morning after the election, Mr. Obrador has urged his supporters to challenge the result with rallies and demonstrations in Mexico City. After the court's decision, Mr. Obrador announced plans for a massive September 16 rally in Mexico City's Zocalo plaza where he will announce plans for an alternative government. A recent poll by newspaper *El Universal* showed that 59% of the people surveyed believe the election was fraudulent. Are we about to witness the start of a period of civil disobedience in Mexico that creates an unstable social, political and economic environment?

### Over 60% of Pemex's revenues go to the government in taxes

Unfortunately for the next government, its reliance on income from state oil company Pemex to both fund the government and provide money for social programs may be vulnerable to Peak Oil. High oil prices and greater production have boosted revenues for Pemex and income for the government. Currently, over 60% of Pemex's revenues go to the government in taxes. In addition, the Mexican government takes 39.2% of the revenues between the budgeted sales price for Pemex's oil and its actual sales price. In addition, 8% of Pemex's revenues go to pay its pension expense. As a result of its huge tax and social spending drain, Pemex has to rely on outside funding for its capital investment, which has hurt the company's ability to replace reserves and sustain, or grow, the country's oil

**Pemex will invest 2.8 billion pesos (\$260 million) with a goal of producing 20,000 b/d of oil in a reactivated field by the end of 2007**

**Cantarell's May production was only 1.8 million b/d and in June it was down to 1.74 million b/d**

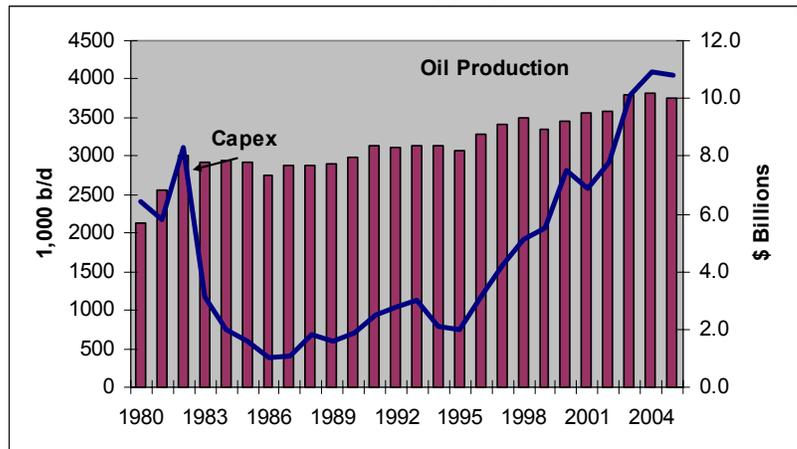
**If Mexico's production falls as the Cantarell forecast projects, then one has to wonder how the government will fund its operations in the future**

production. At the present time, Pemex has \$45 billion of debt.

Recently, Pemex announced it is reactivating development of a mature oil field in the Gulf of Mexico. It is starting to produce oil from the Carpa field 27 miles from the Gulf coast city of Tuxpan in the Foja de Oro Marina trend. This trend, referred to as the "offshore golden lane," was discovered in the 1960s. Under the plan, Pemex will invest 2.8 billion pesos (\$260 million) with a goal of producing 20,000 b/d of oil by the end of 2007.

The new production is part of Pemex's response to confronting its Peak Oil challenge. The Cantarell field, that accounts for two-thirds of the Mexico's production and has been the mainstay of its growth so far this decade, is beginning to decline. Cantarell's production peaked in 2004 at 2.13 million b/d. In August 2004, Luis Ramirez Corzo, head of Pemex E&P, stated that Cantarell had peaked and would begin to decline at a 14% per year rate through the end of the decade. Earlier production figures showed that Cantarell's production had held up slightly better, but that may be about to change as new projections call for it to experience an accelerating rate of decline. Cantarell's production dipped by about 6% in 2005 and should decline 8% this year to 1.86 million b/d. However, its May production was only 1.8 million b/d and in June it was down to 1.74 million b/d. New forecasts call for production to drop 10% in 2007 and 15% in 2008 to 1.43 million b/d. The combined production decline forecast for 2006 and 2007 will be 340,000 b/d, yet the new Carpa field production will barely offset 6% of what is lost.

**Exhibit 1. Mexico's Production Lagging Capex Growth**



Source: EIA, Pemex, PPHB

As Pemex struggles with how to find and develop new oil and gas reserves, its cash flow lifeblood is being drained by the government, limiting the company's ability to reinvest. If Mexico's production falls as the Cantarell forecast projects, then one has to wonder how the government will fund its operations in the future. However, if the production starts falling quicker, then cash flow will shrink faster than

**The politically sensitive issue of Mexican immigration into the U.S. could become even worse if Mexico's financial problems worsen**

anticipated. Should global oil prices fall for any reason, then the financial challenges facing Pemex and the Mexican government will become even more difficult. The politically sensitive issue of Mexican immigration into the U.S. could become even worse if Mexico's financial problems worsen.

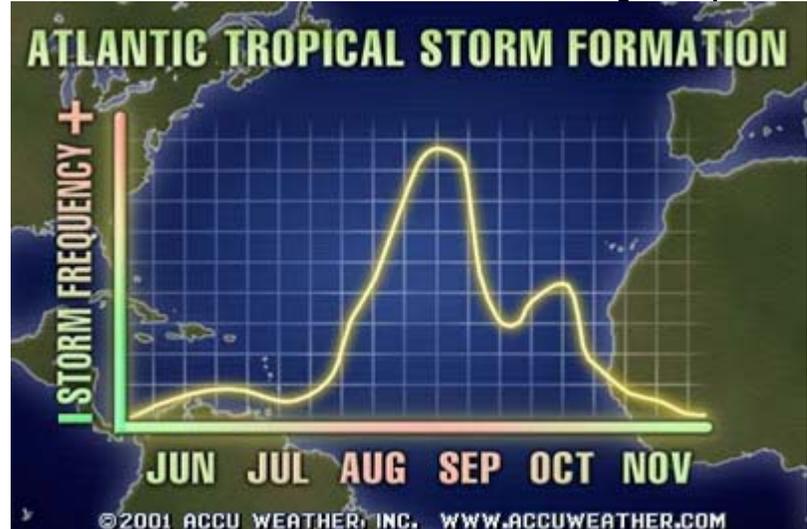
Mid September may prove an important time to judge how the political left deals with the new government and potentially deteriorating economic and social conditions. Mexico might soon join Nigeria, Venezuela, Bolivia, Ecuador, et al, as an important, but troubled, energy producing supplier to the United States.

## So Much for an Active Hurricane Season?

**This hurricane season initially was projected to be almost as active as 2005's record season, but now forecasters are not so sure**

On the one-year anniversary of the arrival of Hurricane Katrina that virtually ripped New Orleans and the Mississippi Gulf Coast off the face of the earth, tropical storm Ernesto grew into the first hurricane of the 2006 season. This hurricane season initially was projected to be almost as active as 2005's record season. However, as we went through a quiet early part of the season, full year expectations are being scaled back by the primary hurricane forecasters and now they are not so sure that we will have an active season.

**Exhibit 2. Hurricane Peak Formation Time Is August/September**



Source: Accuweather.com

Based on history, the late August/early September time period is the most active period for tropical storm and hurricane formation. The pattern of the past two years shows an even distribution of tropical storms and hurricanes formed prior to and then after August 26. If this pattern holds for the balance of the 2006 season, we may be treated to a significantly lower number of storms than are forecast. That said, it only takes one intense hurricane hitting the U.S., or elsewhere, to inflict serious damage. As a reminder, Hurricane Andrew, the monster hurricane (Category 5) that devastated south

Florida in 1992, and later damaged the Gulf of Mexico oil and gas producing infrastructure, was the first hurricane of that season, and it did not form until August 14 and didn't hit the United States until August 22.

### Exhibit 3. Calm Hurricane Season Not Unusual

Year	Before Aug. 26			After Aug. 26			Season Total			
	Trp Storms	Hurricanes	Total	Trp Storms	Hurricanes	Total	Trp Storms	Hurricanes	Total	Hit US
1990	5	3	8	1	5	6	6	8	14	1
1991	1	1	2	3	3	6	4	4	8	1
1992	0	1	1	2	3	5	2	4	6	2
1993	4	1	5	0	3	3	4	4	8	2
1994	2	1	3	2	2	4	4	3	7	3
1995	6	5	11	2	6	8	8	11	19	5
1996	2	5	7	2	4	6	4	9	13	4
1997	2	2	4	2	1	3	4	3	7	1
1998	2	2	4	2	8	10	4	10	14	7
1999	2	3	5	2	5	7	4	8	12	5
2000	2	2	4	4	6	10	6	8	14	2
2001	4	0	4	2	9	11	6	9	15	3
2002	3	0	3	5	4	9	8	4	12	8
2003	2	3	5	7	4	11	9	7	16	4
2004	2	4	6	3	5	8	5	9	14	9
2005	6	5	11	6	10	16	12	15	27	7
2006	5	0	5			0	5	0	5	

Source: NOAA, New York Times, PPHB

**The calm hurricane season so far has intensified the global warming debate**

After last year's unusual hurricane activity, climatologists and hurricane forecasters stepped up their battle over whether global warming is the cause for the increased intensity of the storms being experienced. The calm hurricane season so far has intensified this debate. By using different time periods, and with different academic backgrounds, the interpretation of the climate and hurricane data leads to different conclusions. The heightened attention to this issue following hurricanes Katrina and Rita last year and \$3 a gallon gasoline prices has been reinforced this year by former vice president Al Gore's documentary film "An Inconvenient Truth." The film suggests that last year's storms were the result of a broader climate trend clearly traceable to global warming. That view was recently reinforced by environmentalist Lester Brown, president of the Earth Policy Institute, who called the 350,000 Katrina evacuees who will not return home "the world's first climate refugees."

**The most recent articles argue over the quality of the climate data being used to forecast hurricanes and the amount of data analyzed**

We have written about many of the pros and cons of the climate and hurricane studies, but they keep coming and intensify the debate. The most recent articles argue over the quality of the climate data being used to forecast hurricanes and the amount of data analyzed. Dr. Christopher Landsea of the National Oceanic and Atmospheric Administration's Hurricane Research Division published an opinion piece in the journal *Science* in July in which he argued that studies indicating that recent hurricanes have become more intense than those in the past may be based on flawed data. He pointed out that wind and temperature measurement technologies were less sophisticated and less extensive in the past and may have underestimated the strength of earlier storms.

In addition, there have been debates over the number of storms and hurricanes that occurred each year in the 1930s, 1940s and 1950s, the most recent historic period when Atlantic Ocean surface

**Two papers argue that average air temperatures during hurricane season predict the Atlantic Ocean's surface temperatures, not vice versa, and that rising sea temperatures have been accompanied by more intense hurricanes**

temperatures were as warm as now. The fact is we have more satellites and better weather intelligence today that provides us additional and better data about storms. Since these tools were not available in the earlier period, the possibility exists that historic data only captured a portion of the number of storms and hurricanes the globe actually experienced.

Two papers have investigated the thesis about atmospheric temperatures and Atlantic Ocean sea temperatures. These papers, authored by professors from Georgia Tech and Florida State University, argue that average air temperatures during hurricane season predict the Atlantic Ocean's surface temperatures, not vice versa, and that rising sea temperatures have been accompanied by more intense hurricanes. One paper is based on a re-analysis of a 35-year hurricane database to determine whether it really is skewed as Dr. Landsea claims. Clearly the author does not accept Dr. Landsea's view. The author, however, views the other paper as having identified "an interesting statistical relationship" but does not physically explain how warmer air might be heating the Atlantic Ocean. This is an interesting conclusion because it supports other anti-global warming studies that have found close statistical relationships between randomly generated data that may have no bearing on the climate change patterns observed.

Phillip Klotzbach of Colorado State University published a paper showing that since 1986 there has been no global trend in hurricane intensity. "At this point, we haven't seen any significant correlation" between hurricanes and climate change, he said. He only looked at a 20-year period rather than the 35-year period studied as the basis for the Georgia Tech paper's conclusions. Does this more limited time period invalidate the study as the critics claim?

**Behind much of this debate lays billions of dollars of federal funding for climate change, global warming and hurricane prediction research**

Behind much of this debate lays billions of dollars of federal funding for climate change, global warming and hurricane prediction research. We are not suggesting that academic research is being driven purely by the availability of federal research grants, but this growing pile of available cash in a world of shrinking federal and state funding of higher education can be a strong agent fanning the debate. The more shrill the plea, the greater the funding.

**"Life is a tale told by an idiot – full of sound and fury, signifying nothing"**

We remember that in the mid 1970s, the academic debate was about the coming ice age, when it wasn't preoccupied with trying to figure out how the world was going to support the exploding global population. In our view, politicians are only too happy to fund this type of research. Studies seeking solutions to broad global issues postpone the day that the politicians must vote on specific actions that may possibly harm their constituents. Regardless of whether we have more or no hurricanes in the second half of this storm season, this climate debate will rage on. Hopefully, the debate will not be as William Shakespeare put it, "Life is a tale told by an idiot – full of sound and fury, signifying nothing."

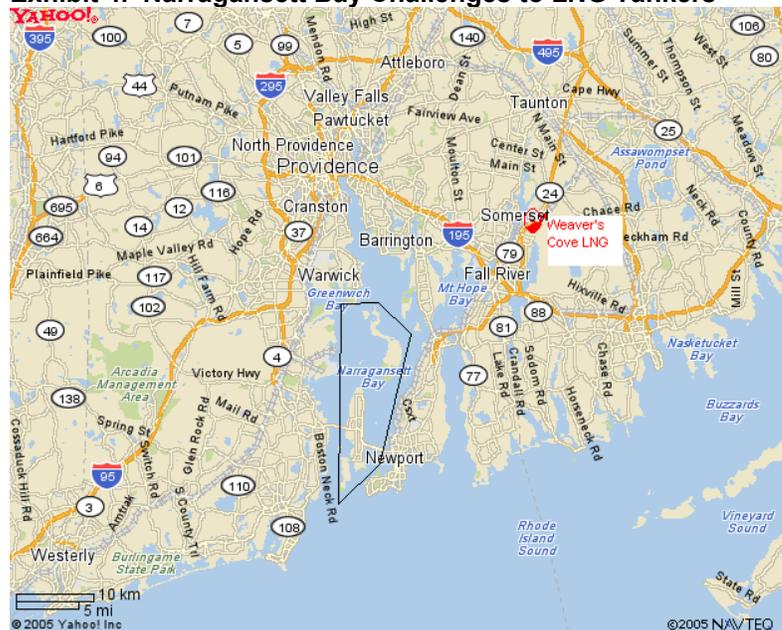
# Weaver's Cove LNG Tanker Route

**The voyage traversed part of the route tankers would travel on their way to the proposed LNG terminal at Weaver's Cove**

Two weeks ago, my wife and I, along with her cousin and his wife, boarded a Rhode Island Fast Ferry for a tour of the lighthouses of Narragansett Bay. The ferry, based at Quonset Point on the Warrick side of Narragansett Bay, motored down the west passage of the bay to Newport Harbor and then back up the east passage passing about a dozen active and antiquated lighthouses. We were interested that the voyage traversed part of the route tankers would travel on their way to the proposed LNG terminal at Weaver's Cove in Fall River, Massachusetts. This project has generated significant local opposition and political meddling in legislation designed specifically to sabotage the project that already has been approved by the Federal Energy Regulatory Commission (FERC).

One objection to the LNG terminal is that restrictions on vessels being within the security zone surrounding an LNG tanker would disrupt recreational activity on Narragansett Bay. As shown in Exhibit 4, we traveled down Narragansett Bay to its mouth and then to Newport Harbor and under the Claiborne Pell (Newport) Bridge between Jamestown Island and Newport and up the east passage of the bay before turning back toward Warrick as we rounded the tip of Jamestown. During this part of the voyage, we observed that there were a number of pleasure and tour boats moving in and out of Newport Harbor. Clearly some of this activity would be disrupted by LNG tanker movements, but we are not sure that more than half of the recreational and tour vessels we saw would be impacted. However, if they are impacted, it will only be for a brief period. Motor vehicle traffic on bridges is stopped whenever an LNG tanker goes under, but again for only a brief time period.

**Exhibit 4. Narragansett Bay Challenges to LNG Tankers**



Source: Yahoo Maps

**We saw fewer than a dozen recreational vessels between the Claiborne Pell (Newport) Bridge and the bridge at the junction of Narragansett Bay and Mt. Hope Bay**

On our voyage, we saw fewer than a dozen recreational vessels between the Claiborne Pell (Newport) Bridge and the bridge at the junction of Narragansett Bay and Mt. Hope Bay pictured in Exhibit 5. We were surprised at the number of vessels because, even though it was a weekday, we were in the height of summer in New England. Critics would probably suggest that there are a great many more recreational vessels in these waters on weekends, but we suspect that LNG tanker traffic could be avoided on Saturdays and Sundays, at least during summer months. While we don't know how fast LNG tankers would travel, they are only traversing about 12 miles on this portion of the voyage so the disruption time should be limited.

#### **Exhibit 5. Rhode Island Power Plant On LNG Tanker Route**



Source: Betty Brooks

**Editorials have been positive but the letters tend to be unanimously against the construction of these windmill projects**

On our trip, one thing we did observe was a windmill, located at a monastery. The sight of it brought to mind the battles over the Cape Wind and Buzzard's Bay wind farm projects that continue to be the topic of editorials and letters to the editors in the local Rhode Island and Boston newspapers. As one might expect, the editorials have been positive but the letters tend to be unanimously against the construction of these windmill projects.

As we looked at this lone Rhode Island windmill, we wondered why the locals are not clamoring for its removal. Talk about visual pollution! Maybe the problem is that the income of the people who live in the windmill's vicinity, or its owner, is not sufficient to make them immune to the cost saving and climate benefit contributions. Interestingly, there is a power plant with smoke stacks located behind the bridge in Exhibit 5 that doesn't raise visual pollution objections. The windmill battle increasingly seems to be a socio-economic issue, or more bluntly, class warfare.

**Exhibit 6. Lone Rhode Island Windmill On LNG Tanker Route**

Source: Betty Brooks

## Venezuela, Chavez and His China Gift Bag

**Venezuela will boost the volume of oil it sells to China from 150,000 b/d currently to 1.0 million b/d by 2012**

As expected, Venezuelan President Hugo Chavez announced several deals following his August 22-25 trip to China. The key deals involved the energy market. Venezuela will boost the volume of oil it sells to China from 150,000 b/d currently to 200,000 b/d by the end of 2006, and further boost it to 500,000 b/d by 2011 and 1.0 million b/d by 2012. China has agreed to invest in developing new oil and natural gas fields, especially bitumen resources in the Orinoco Belt. China also will sell Venezuela 18 oil tankers and 12 drilling rigs.

**The Lyondell contract would theoretically supply roughly half of the programmed oil supply increase**

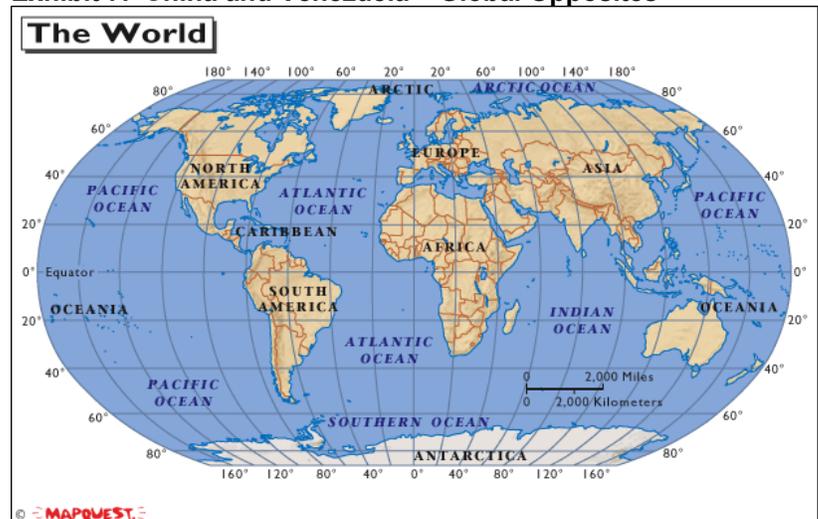
While these transactions were anticipated, they represent additional pieces of the puzzle for Hugo Chavez's strategy to move his oil industry away from total dependence on the United States. As demonstrated by the terms of the China supply contracts, this strategy will take a number of years to implement, if it ever will be fully implemented. In our last issue of Musings, we discussed the sale by national oil company, Petroleos de Venezuela S.A.'s (PdVSA), of its interest in the Lyondell-CITGO refinery and the subsequent signing of a 260,000 b/d, five-year crude oil supply agreement. That agreement would end in 2011. Note that the newly announced crude oil supply agreement with China is targeted to jump by 500,000 b/d between 2011 and 2012. The Lyondell Chemical Co, (LYO-NYSE) contract alone would theoretically supply roughly half of that programmed increase.

The purchase of 18 new oil tankers may signal that PdVSA is planning to ship the expanding oil supply to China in its own ships, helping to minimize the financial cost of selling this lower quality Venezuelan crude oil. At the present time, Venezuela has no oil

**The voyage around the southern tip of South America and across the Pacific Ocean to China takes about 45 days and costs at least \$3 per barrel**

export outlet on the Pacific Ocean side of South America. Therefore, as China is almost exactly opposite Venezuela on the other side of the world, the voyage the oil must take represents the longest route in the tanker industry, 13,078 miles. With oil export facilities in the Caribbean and Atlantic waters, the voyage around the southern tip of South America and across the Pacific Ocean to China takes about 45 days. At current tanker charter rates, this voyage would add between \$3 and \$4 per barrel as opposed to about \$0.40 per barrel for shipments to the United States.

#### Exhibit 7. China and Venezuela – Global Opposites



Source: Mapquest

**The low quality of Venezuela's crude oil results in it trading at a discount to world oil prices by as much as \$5 per barrel**

Venezuela's crude oil is viscous and contaminated, making it hard to refine. At the present time, China's refinery industry is not equipped to refine this oil. It is planning to make investments to upgrade some of its refining capacity in order to be able to process this and other heavy and metallic crude oils, which will likely account for a greater share of future global oil supply. The low quality of Venezuela's crude oil results in it trading at a discount to world oil prices by as much as \$5 per barrel. Current high oil prices and the tight global oil supply situation have insulated Venezuela from the problem of a growing proportion of its oil reflecting this lower priced oil.

Stratfor.com suggests that the only way China will take delivery of large volumes of Venezuelan oil at market prices is if certain actions happen. Among those actions is Venezuela assisting China in revamping its refinery capacity to handle the lower quality crude oil; Venezuela operating its own fleet of tankers to move the oil to China or paying the full cost of transportation; and/or Venezuela supplying the crude oil at a discount. We remember that previous crude oil supply agreements between Venezuela and China have addressed the refinery revamp issue. The purchase of 18 new oil tankers might suggest that Venezuela will provide the transportation. If these two steps are taken, then Venezuela probably would not need to discount the oil price meaningfully.

**The momentum for Venezuela to remove itself as a major U.S. oil supplier is moving forward and will likely not change**

We believe the laws of physics are applicable with respect to Venezuela and U.S. oil relations. The momentum for Venezuela to remove itself as a major U.S. oil supplier is moving forward and will likely not change. Likewise, the momentum of revamping the U.S. oil pipeline shipping network to handle growing volumes of heavy Canadian oil sands output is likely not going to change, either. Investment opportunities should exist as the domestic pipeline infrastructure is revamped, upgraded and expanded, while internationally the oil tanker market looks ripe to benefit.

## Japan and the Java Refinery

**Japanese Prime Minister Junichiro Koizumi said that his country relies too much on the Middle East for energy**

In the last issue of Musings, we discussed the announcement of a new refinery venture between Venezuela, Indonesia and Iran on the island of Java. A quarter of the ownership in the refinery remains available for another party, and it was suggested that Japan was the likely partner.

On August 28, as Japanese Prime Minister Junichiro Koizumi left for a 4-day tour of Central Asia, he said that his country relies too much on the Middle East for energy. That sounds like he was heading out to find non-Middle East oil supplies. During the Prime Minister's visit to Kazakhstan he agreed to send nuclear engineers there and to develop a uranium mine whose output would also benefit Japan. Logistically, oil supplies from Kazakhstan and Uzbekistan are not an easy alternative for Japan, especially given the easier shipping alternative from the South Pacific. We expect Japan will become an investor in the new Indonesian/Venezuelan/Iranian oil refinery project, further boosting the standing of its partners.

## LNG Security Lapse Hurts Utilities

**Security breaches at existing LNG facilities considered potential terrorist targets will do nothing to help sway public opinion in favor of building new and expanding existing facilities**

In mid August, two intruders, using wire cutters, broke into the KeySpan Corp. (KSE-NYSE) LNG facility in Lynn, Massachusetts. While it is disconcerting that these intruders were not caught, the bigger problem is that the incident was not seen for five days because company officials failed to review a surveillance tape that captured the incident. Massachusetts officials were sharply critical of the company's actions and have launched an investigation that could result in tens of thousands of dollars in fines.

Further raising concern is that in June, 15 undocumented immigrants working for a cleaning subcontractor were arrested after they took a shortcut through the ExxonMobil LNG facility in Everett, Massachusetts without identification. Local opposition to new LNG facilities in the region is high and growing. Security breaches at existing LNG facilities considered potential terrorist targets will do nothing to help sway public opinion in favor of building new and expanding existing facilities. Add another public relations black-eye for the energy industry.

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