

MUSINGS FROM THE OIL PATCH September 19, 2005

Allen Brooks
Managing Director

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

Energy Demand Forecasts Ratcheting Down

The IEA since March has been in a period of consistent oil demand forecast reductions

In contrast to the prior two years, the International Energy Agency (IEA) since March has been in a period of consistent oil demand forecast reductions. The latest demand cuts made to the group's forecast in its September monthly report were by 250,000 b/d for both 2005 and 2006. The IEA is now forecasting global demand growth of only 1.35 million b/d, or an increase of 1.6%, to an average of 83.48 million b/d for 2005. In 2006, the IEA anticipates growth of 2.1%, or 1.77 million b/d, to 85.25 million b/d. These reductions largely have been driven by weaker OECD demand, principally in the United States, and lower apparent Chinese demand.

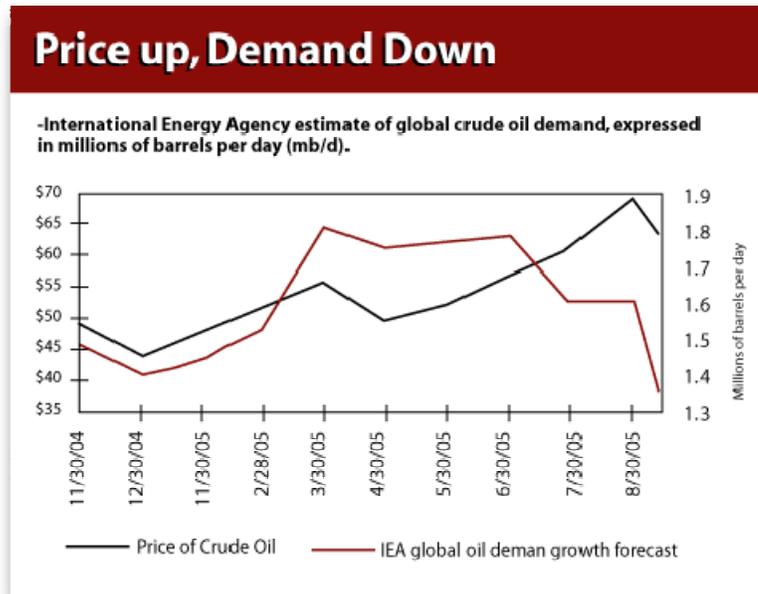
Attempting to understand what is going on with Chinese energy demand is extremely difficult given the lack of government transparency. Based on economic output statistics, one would suspect that Chinese energy demand remains healthy. However, the critical question is how reflective last year's energy demand growth is for estimating energy demand growth in 2005 and 2006? Was it possible that China was importing more oil than needed then, but now needs less because it has been able to bring on stream alternative energy supply sources?

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Beginning in late 2003, the IEA was in a mode of constantly revising upward its forecasts of global oil demand. The need for these constant revisions was driven by the recognition that the IEA did not understand the true nature of the forces driving the dramatic oil demand increases in China. The country's economic activity was straining its ability to generate adequate electricity. Many companies and municipalities were buying portable electric generators that were powered by diesel fuel, thereby boosting oil demand. At the same time, a growing middle class was starting to

increase its consumption of products that boost energy demand such as automobiles, new homes and electrically powered appliances.

Exhibit 1. Price and Demand Are Related



Source: The Rude Awakening, Sept. 9, 2005

The lack of clarity about China's energy demand continues to haunt energy forecasters, including the IEA

As the IEA was chasing China's energy demand totals last year, the oil market focus switched from demand growth to supply capacity. The issue of global supply continues to dominate the oil price forecasts. As we entered late 2004, the IEA was starting to make consistent upward revisions to their 2005 demand forecast, just as they had in 2003 and 2004. The energy market began to focus on the ability of the world's oil producers to meet winter oil needs in the fourth quarter of 2005. Then in early 2005, China's crude oil import figures fell short of the growth rates in 2003 and 2004. Forecasters, and the energy market, became confused. Was demand growth slowing in China? Or is demand up and are the statistics wrong? Just when everyone began to believe that China's demand was slowing, the government released economic performance figures that suggested China's economy was running as strongly as it had in the past. The lack of clarity about China's energy demand continues to haunt energy forecasters, including the IEA.

The Energy Information Administration (EIA) has reduced its forecast for U.S. energy consumption as a result of the impact of Hurricane Katrina on economic activity coupled with the rise in short term interest rates. While there is a school of thought that says there will be a boost in economic activity and energy demand, due to the massive Gulf Coast rebuilding effort, projecting just how much of an impact and exactly when that boost will hit is impossible to determine. The counter to this demand boost is the possible

negative impact on energy demand from rising interest rates due to the need to finance a substantially greater budget deficit associated with the money needed to finance the rebuilding effort. In addition, the sharp rise in gasoline pump prices has had a dramatically negative impact on fuel consumption for the past two weeks.

The EIA cut its U.S. oil demand growth forecast for 2005 by 60,000 b/d to only a 100,000 b/d increase, or 0.5% growth. The 2006 demand forecast was cut by 100,000 b/d to growth of 330,000 b/d, or a 1.6% rate of increase. The EIA is maintaining its overall forecast of annual growth of 1.7 million b/d in global demand for both 2005 and 2006.

OPEC also adjusted its demand growth forecasts based on the latest developments. They are now forecasting demand growth of 1.4 million b/d in 2005 to an average of 83.5 million b/d. They are estimating growth of 1.5 million b/d in 2006.

OPEC's Vienna meeting this week will be little more than a photo-op for the oil ministers

OPEC is meeting Monday and Tuesday of this week in one of their regularly scheduled meetings. The media is reporting that OPEC oil ministers are discussing raising their production ceiling by 500,000 b/d to 28.5 million b/d. The issue is that since virtually every OPEC member is producing at maximum capacity, raising the production quota ceiling will do little to add additional oil to the market. Since the majority of the surplus productive capacity in OPEC is represented by Saudi Arabia's heavy and sour oil that is not wanted by refiners, this Vienna OPEC meeting will be little more than a photo-op for the oil ministers. Of course they need that to demonstrate that OPEC is doing all it can to lower world oil prices.

Just how quickly these forces – falling U.S. supply versus rising gasoline and diesel pump prices that cut demand – impact the global market will determine what happens to oil prices in the near term

Given the impact of Hurricane Katrina on the U.S. economy, it is hard not to believe that energy demand will be reduced. As discussed in other stories in this newsletter, given the jump in global gasoline and diesel prices recently experienced there will be a meaningful impact on demand. At the same time, the U.S. has suffered a loss in Gulf of Mexico production that will further tighten the global oil supply/demand balance. Just how quickly these forces – falling U.S. supply versus rising gasoline and diesel pump prices that cut demand – impact the global market will determine what happens to oil prices in the near term.

Besides weaker Chinese energy demand, the other demand force – India – is also slowing. India raised auto fuel prices by 7% last week. In addition, Brazil's Petrobras (PBR-NYSE) raised the price of gasoline and diesel fuel prices for the first time this year. The hikes were a healthy 10% increase for each fuel. Forecasters such as Goldman Sachs (GS-NYSE) reiterated its forecast for a potential spike to \$105 per barrel and both CIBC (BCM-NYSE) and Venezuela's Chavez issued projections for \$100 per barrel prices. CIBC raised its official price forecast for 2006 from \$65 per barrel to \$84 and then averaging \$93 in 2007, while reaching \$100 per barrel by the fourth quarter. At some point, demand will respond to the high prices, either voluntarily, or involuntarily, in response to falling

economic activity.

Latin American Impoverished By High Energy Prices

Recently, 13 Caribbean countries were granted preferential oil trade deals by Venezuela under the PetroCaribe program

The poor countries of Latin America are being impoverished by high energy prices. This has set the stage for revolutionaries such as Fidel Castro and Hugo Chavez to strengthen their push for social revolution in the region and attacks against the regional influence of the United States. Recently, 13 Caribbean countries were granted preferential oil trade deals by Venezuela under the PetroCaribe program. The initiative also includes a \$50 million fund to finance social programs in many of these countries along the lines of those sponsored by Venezuelan President Hugo Chavez at home.

Venezuela will sell 190,000 b/d of oil at market prices but in the form of loans that the Caribbean buyers will be able to repay over 25 years at one percent interest rates. A portion of the loan may be repaid with goods such as rice, bananas and sugar. However, given the weak financial condition of most of these countries, it is likely that all they will do is acquire more and more debt that they will not be able to pay off putting their economies under increased stress. This financial pressure will force the governments to enact policies that likely will foment civil unrest.

The financial relief from Venezuela will go a long way to strengthening the standing of Chavez within Latin America. The health of the countries he is befriending is deteriorating rapidly. For example, in Honduras, a proposed 19.7% hike in gasoline prices designed to curb gasoline demand prompted taxi and bus drivers to rally in the capital in opposition. The protest forced the government to reduce the increase to only 9.9%. However, on September 9, the country experienced its first civil unrest in years as protesters blocked roads and demonstrated nationwide against that price hike.

On September 12, the Dominican Republic announced emergency restrictions on gasoline consumption in an effort to cut demand. Jamaica experienced mass protests as a result of fuel price increases. In Paraguay, the state energy company, Petroleos Paraguayos, recently said it is operating at a loss because of the need to fund fuel subsidies. Suriname's public transportation system was brought to a halt on September 12 by drivers protesting a government decision to nearly double gasoline and diesel prices. The Chilean government, experiencing a natural gas shortage due to an interruption of exports from Argentina, announced a 10-month subsidy program to cap gasoline prices at \$5.27 per gallon. Without the subsidy, the price would have hit \$6.37 per gallon in August. Chile is using funds from copper sales to fund the subsidy.

Interest in alternatives to gasoline is growing in Latin America

Interest in alternatives to gasoline is growing in Latin America. On September 13, Central American leaders went to Colombia to examine its ethanol industry as an alternative to petroleum. On September 14, Brazilian President Luiz Inacio "Lula" da Silva invited

the group to visit Brazil for the same purpose. This was the first time that high-level Central American leaders have started to consider alternatives to their petroleum-dependent economies in the face of high oil prices.

Honduras depends on petroleum fuels for about half its power generation, while Guatemala generates nearly 60% of its power from gasoline-fired plants and Nicaragua gets 85% of its electricity from oil-powered plants. Persistently high crude oil prices will increase the likelihood that these countries will be forced to ration electricity, a potentially dangerous social situation. Clearly, Venezuela's Chavez is hoping to seize on the potential unrest that would generate to strengthen his Bolivian revolution along with his political status. As petroleum production problems continue to impact Bolivia and now Ecuador, Venezuela's regional dominance grows. Should Mexico, Argentina and/or Colombia begin to have production shortfalls, Chavez might find himself in the perfect storm.

It is hard to conceive that energy issues and their impact on economies and social policies will not be the key topic in the Latin American elections of 2005 and 2006

Elections are scheduled between now and the end of 2006 in Argentina, Honduras, Chile, Bolivia, Cost Rica, Colombia, Mexico, Nicaragua and many of the small Caribbean nations. Given the current environment, it is hard to conceive that energy issues and their impact on economies and social policies will not be the key topic. The possibility that governments in these countries will become more socialistic and radical is growing.

What Carrot?

French Energy Minister Thierry Breton is on a campaign to force local oil companies to reduce their fuel prices

With the recent jump in global energy prices, driven largely by Hurricane Katrina, French Energy Minister Thierry Breton embarked on a campaign to force local oil companies to reduce their fuel prices. In contrast to the conventional stick and carrot approach to getting companies operating in the free market to respond to a government's social policy initiatives, Mr. Breton has used all stick. France is the only European country to pressure its oil industry to roll back prices at the pump to help its citizens. On September 8th, Mr. Breton called for a special meeting of officials with the oil companies operating in France, scheduled for September 16. Total (TOT-NYSE), with over 20% of the French auto fuel market, moved the next day to cut its pump prices by 0.03 euro per liter. The reduction was matched by BP (BP-NYSE) the following Monday. These price reductions helped ease fuel prices that had climbed to 1.50 euros per liter.

Mr. Breton said, "I therefore say to the oil sector that it has to come up with intelligent and strong responses, in the absence of which I will be obliged to intervene by imposing a tax on these exceptional profits." His stick – the threat of a windfall profits tax – seems to have carried impressive clout.

That threat accelerated a Total capital investment program designed to expand and upgrade its French refineries. Total has announced

that it will spend 2.8 billion euros (\$3.4 billion) on its domestic refineries over the next five years. This is more than three times the amount the company has spent on them in the first half of this decade. The investment should boost diesel output by 4 million metric tons (545,000 barrels). The announcement came hours before the start of the special oil company meeting with Mr. Breton, and officials admitted that they accelerated the spending plan that had already been under consideration.

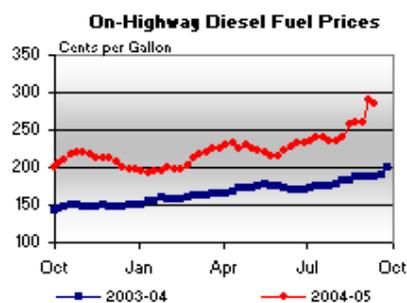
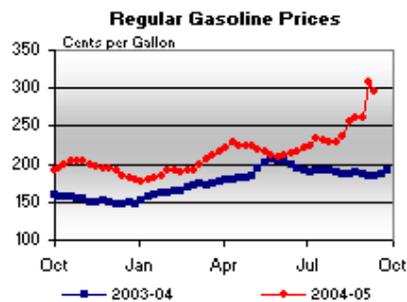
Total detailed some of the incremental spending. It plans to spend 500 million euros (\$611 million) on the increased diesel production. Another 400 million euros (\$489 million) will be spent to improve the environmental performance of the refineries. Total will spend 800 million euros (\$978 million) on a new upgrader to convert surplus heavy fuel oil into automobile fuel. In addition, the company plans on spending 500 million euros (\$611 million) on various wind and solar power projects.

Price Gouging – The U.S. Version

Mr. Jenkins focused on the Pavlovian response of U.S. politicians who cry “price gouging” and then rush in front of the TV cameras to announce legislation and investigations of the oil industry

We read with great relish the September 14 opinion column by Holman Jenkins of *The Wall Street Journal*. Mr. Jenkins focused on the Pavlovian response of U.S. politicians who cry “price gouging” and then rush in front of the TV cameras to announce legislation and investigations of the oil industry whenever the price of gasoline jumps, but totally ignore the industry when prices drop. As Mr. Jenkins pointed out correctly, the country survived the Labor Day weekend without the gasoline shortages that had been widely predicted by many sage observers following the damage caused by Hurricane Katrina.

Exhibit 2. U.S. Fuel Prices Climb



Source: EIA

80% of consumers say that fluctuating gasoline prices are having an impact on their spending

According to research conducted by BIGresearch, 80% of consumers say that fluctuating gasoline prices are having an impact on their spending. As a result, they are delaying or reducing expenditures on cars, TVs, furniture, groceries, clothing, dining out and vacation/travel. In addition, 77% of those impacted by gasoline prices say they are driving less. According to Joe Pilotta, VP Research, BIGresearch, "The U.S. Consumer is not viewing fuel for their cars as a hard necessity, but between a need and a want, which has to be managed. This mindset will create spending impacts, which could have a 'multiplier effect.'"

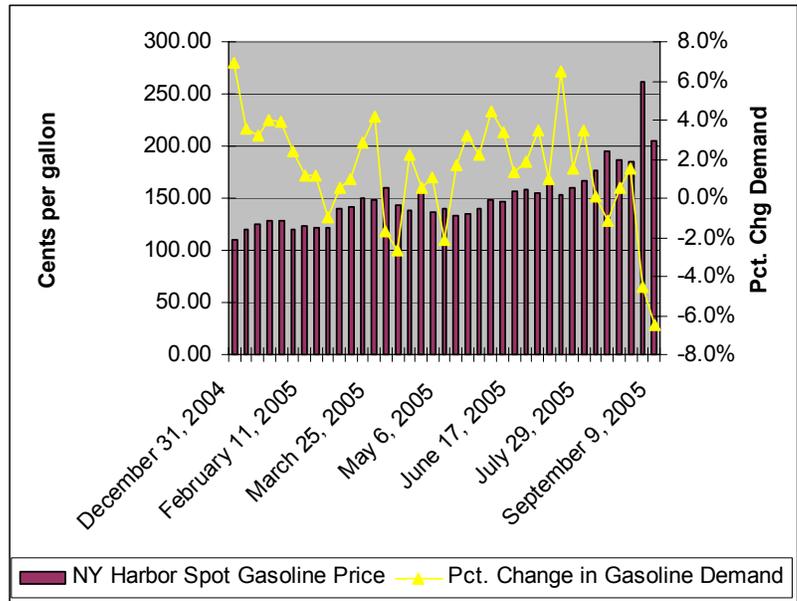
High gasoline prices have generated a popular belief that gasoline companies are taking advantage of rising crude oil

Mr. Jenkins wrote about the politicians and bureaucrats who have started investigations of gasoline station owners who raised their prices as oil prices were climbing. He cited two examples. In Florida, one station owner told investigators that the reason he raised prices was simply because he had too many customers. This is the proper action for a businessman in free market. However, for being so honest, this owner was named in the first lawsuit the state brought in its price gouging investigation. The other example cited was in Westchester County, N.Y., which has 400 gasoline stations, but only targeted 11 with subpoenas for price gouging. According to Mr. Jenkins, the head of the Westchester consumer protection office went on local TV and all but declared one station owner guilty because he had raised his price more than the station down the street. Clearly high gasoline prices have generated a popular belief that gasoline companies are taking advantage of rising crude oil prices to boost their retail prices by more than their cost increases. We suspect that when all the investigations are completed, they will reach the same conclusion as all previous investigations: there was no price gouging.

Does the demand falloff of the past two weeks signal an economic response to high gasoline prices, or is it due to factors such as the loss of demand due to the devastation of the Gulf Coast?

The more important aspect of the jump in gasoline prices has been the impact on demand. The past two weeks, as gasoline prices exploded, we have seen the largest year-over-year declines in gasoline demand in three years. Exhibit 4 shows the relationship of N.Y. Harbor spot regular gasoline prices compared with the year-over-year change in weekly gasoline demand. The troubling aspect of the most recent demand change is that prior to September 2, this year's gasoline demand was growing at a 1.9% rate. The average decline of the past two weeks is 5.5%. The question is: Does the demand falloff of the past two weeks signal an economic response to high gasoline prices, or is it due to factors such as the loss of demand due to the devastation of the Gulf Coast? If gasoline demand shows further healthy declines during the next several weeks, then we will know that we have reached the trigger price that cuts off demand growth. On the other hand, if demand rebounds, then we will be back debating the possibility that we will overshoot the world's ability to meet global petroleum demand in the fourth quarter of 2005.

Exhibit 3. High Pump Prices Crush Demand



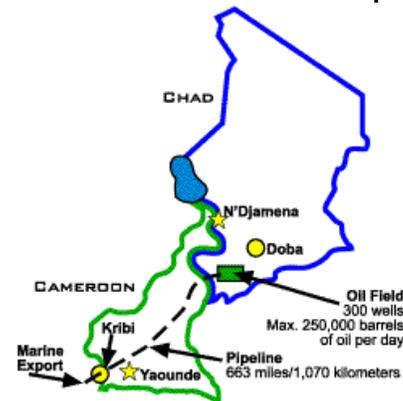
Source: EIA, PPHB

Oil Production in Chad Falls Short of Expectations

The high profile oil development in Chad appears to be underperforming

The high profile oil development in Chad appears to be underperforming. The Chad Cameroon pipeline project, begun in 2000, was eventually completed in July 2003. Initial production into the line began in October 2003 with the first oil exports in November. The project was high profile as it involved virtually every significant world financing arm. Social aid and financial conditions were imposed on the project. The pipeline was built through environmentally sensitive territory. Ownership of the project changed from the original discovery of the fields to the start of construction of the pipeline as two of the original partners, Shell (RDS-NYSE) and Total (TOT-NYSE), were replaced by Malaysia's Petronas and Chevron (CVX-NYSE).

Exhibit 4. Chad Cameroon Pipeline Project



Source: EIA

Oil production, which had reached 200,000 b/d during 2004, has now settled at 180,000 b/d

The pipeline was designed to carry 225,000 b/d of oil from three oil fields (Bolobo, Komé and Miandoun) located in the Doba basin in Chad where reserves are estimated at 900 million barrels. The pipeline extends from Chad through Cameroon to export facilities on the West African coast. Oil production, which had reached 200,000 b/d during 2004, has now settled at 180,000 b/d. The project did export 15.5 million barrels in the second quarter of 2005, but that was below the 18 million barrels exported in the third and fourth quarters of 2004. With higher crude oil prices, Chad's earnings from the export project have exceeded its estimates, even while production is falling short of expectations.

Exhibit 5. Chad and Cameroon in West Africa



Source: EIA

Chad has to worry about both the production trend and global oil prices since Doba oil is heavy and more acidic (21.1° and 4.78 versus 38° and 0.09) than Brent crude oil, but it is lower in sulfur (0.1% versus 0.42%). The challenge for refiners is that they can only turn about one fifth of a barrel of Doba oil into high-value refined products such as gasoline, jet fuel and diesel compared to two-thirds of a barrel of Brent oil.

The partners in the Chad Cameroon pipeline project are working to try to augment current production and better understand the dynamics of the reservoir

The partners in the Chad Cameroon pipeline project are working to try to augment current production. They have engaged in infield drilling in the three fields. They have been exploring for new production and brought into production a small field (Nya) with four wells at the end of June. They also have been working to bring on stream a 25-well field, Moundoui, which lies 25 kilometers west of the Miandoun gathering station.

A significant effort is being devoted to trying to better understand the production characteristics of the three main Doba fields. The wells have been producing a higher proportion of water than originally

Many oil supply forecasts are based on assumed production targets provided by either the oil companies or the host governments, but often miss the mark

anticipated. The oil companies are doing wireline logging in order to obtain more reservoir data about water zones and how they can be sealed off along with performing new acid and frac treatments on producing zones to try to boost production flows.

The underperformance of the Chad Cameroon pipeline project reflects what often happens with major projects - actual production falls short of expectations. That pattern should be considered when viewing detailed industry forecasts of future oil supply. Many of these forecasts are based on assumed production targets provided by either the oil company operators or the host governments. These forecasts seldom build in a cushion to their production estimates for either the inability to meet production targets or for delays in the timing of projects. Occasionally the industry does experience positive results such as ExxonMobil's (XOM-NYSE) Kizomba B field in Angola that came on stream five months ahead of schedule. Usually, the forecasts estimates prove more optimistic than actual results.

The Road Trip Home

On the trip home we felt we were battling more trucks than on the way up

In the August 9th issue, I discussed my impressions and those of my wife on our road trip north to our summer home in Rhode Island. In that story I reported that we both commented on the large number of trucks that we encountered on the road, which I suggested helped to explain the significant increase in diesel fuel demand this year. On the trip home we felt we were battling more trucks than on the way up.

The homeward journey took place over two weekdays (Thursday and Friday), but I had never been so tense driving this trip as this time, due to the large number of trucks. I have learned that with caravans of trucks surrounding you, you not only have to drive your vehicle, but you have to try to imagine driving the trucks since their moves can come quick and without full consideration of smaller vehicles. In other words, you have to try to anticipate what the trucks might do given the traffic they might encounter.

One interesting observation about the route was that there were very few trucks on the road between Knoxville and Memphis

In light of the Gulf Coast devastation by Hurricane Katrina, we elected not to take our normal route down through Mississippi and Louisiana. We felt it would be more difficult to get fuel, food and lodging. Instead, we cut all the way across Tennessee from Knoxville to Memphis and on to Little Rock, Arkansas, and then down through Texarkana and East Texas to Houston. One interesting observation about the route was that there were very few trucks on the road between Knoxville and Memphis. We are not sure why that would be, since Memphis is a major port on the Mississippi River and the home of UPS, but it seemed that most of the trucks headed south toward Alabama and Mississippi from Knoxville.

We did have two hurricane-related encounters. In Tennessee we followed a wide load truck carrying a portable office building with a sign on the back saying "FEMA Delivery." The other encounter was being passed by a truckload of first-responder fire fighters from Lawton, Oklahoma, pulling a trailer with an ATV and a Ford tractor with a front-end loader. Since they passed us on the road after Little Rock, we assumed they were heading home from assisting in the relief effort in the Gulf Coast region.

Another change in our normal trip was to delay leaving by a couple of days. That was designed to give time for the oil markets to come off the boil and let gasoline prices slide lower. In fact, the day before we left Rhode Island, I noticed one close-by gasoline station had dropped its prices by \$0.28 per gallon and then by another \$0.09 the next morning. While we think our delaying strategy worked, there is no way of knowing for sure. However, just as we observed on the way up, gasoline prices seemed to be about the same in the northeast and then about the same in the south, with a spread of about \$0.30 per gallon between the two regions.

I was amazed at how quickly you can become conditioned to high gasoline prices

In purchasing gasoline, I had two emotional reactions. First, was the shock at our initial \$45 partial fill-up. You have to realize that another strategic adjustment we made on this trip was to fill-up the gas tank when we hit the one-quarter remaining indicator rather than go to when the fuel light came on. The second emotion was when we found gasoline priced below \$3.00 per gallon. I was amazed at how quickly you can become conditioned to high gasoline prices. We continue to believe that gasoline prices above \$3.00 per gallon will have an impact on demand.

Contact PPHB:
1900 St. James Place, Suite 125
Houston, Texas 77056
Main Tel: (713) 621-8100
Main Fax: (713) 621-8166
www.pphb.com