

MUSINGS FROM THE OIL PATCH

September 16, 2008

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

This issue was written Sept. 7 as I will be traveling for two weeks,

Will Energy Lose Its Dominant Stock Market Position?

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Energy stocks have been in a free-fall for the past few weeks as investors abandon the investment theme of increasing demand for energy and materials due to the growth of the less developed economies of the world. A key tenant of that strategy was the concept that the developing economies of the world had disconnected from the highly industrialized economies such as the United States, Japan and Western Europe. This tenant always strained credulity given any sojourn through your favorite shopping mall or big box retailer to see the origin of products. Yes, countries such as India and China have large populations and huge potential consumer buying power, but those countries' economies have not been structured to foster consumer consumption, yet.

While investors initially saw the decline in oil and other commodity prices as a tonic to reignite the stock market, the further the commodities fell in price, the greater the concern that other factors are at work. Now, after crude oil has fallen more than 25% in a matter of weeks, demand destruction due to high prices and weak global economic activity is moving front and center in investor thinking. Investor sentiment is beginning to question at what oil price level energy demand will be re-stimulated. Coupled with trying to guess that number, investors are wondering at what price level OPEC's members will step in to support the falling oil price. Is it \$100 a barrel, or could it be the historic inflation-adjusted price of \$70? In either case, stability of oil prices will do wonders for investor sentiment regarding energy stocks.

Bespoke Investment Research has prepared several very interesting

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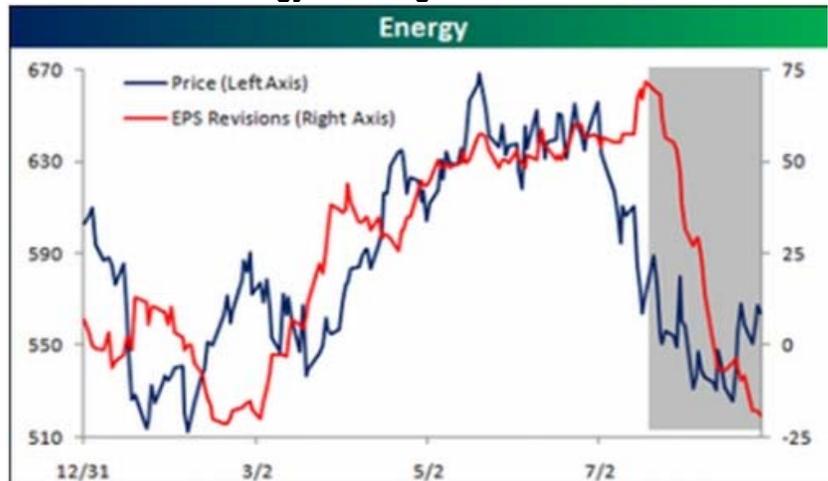
charts that may throw some cold water on the view that once a bottom in oil prices is reached, oil and oil-related stocks will begin to recover. Bespoke has focused on the key issue of earnings momentum – especially as it relates to Wall Street analyst projections. As we have pointed out numerous times, earnings momentum (the rate of change in earnings) can have a greater influence over the direction of a sector's member stock prices than the absolute dollar change in the earnings. In other words, even though your earnings continue to grow, if each succeeding quarter the rate of earnings growth is less than in the previous quarterly comparison, investors will reduce the valuation of your stock.

Exhibit 1. Financial Stocks Are Gaining Strength



Source: Bespoke Investment

Exhibit 2. While Energy Is Losing It



Source: Bespoke Investment

According to Bespoke's data, in mid-July, nearly 55% of the stocks in the financial sector had seen their earnings estimates reduced during the prior month. At the end of August, that ratio had declined

We suspect that most of the reductions are related in one way or another to the pullback in commodity prices

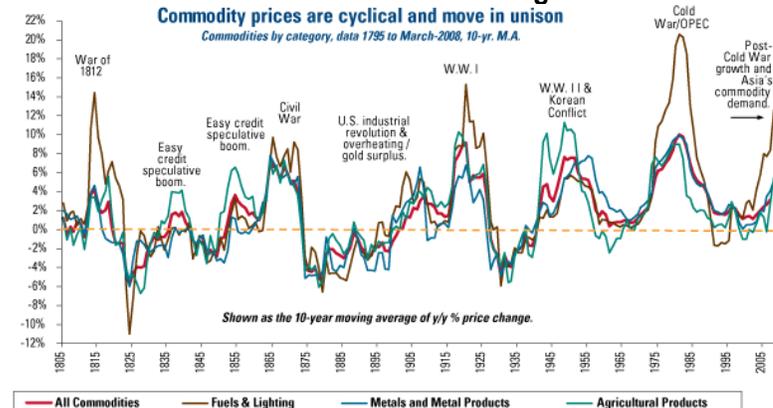
The bottom line is that the financials have weathered possibly their worst earnings period in a life-time

to 25%. In contrast, the energy sector at mid-July had seen Wall Street analysts raise 75% of the companies' earnings estimates over the prior four-week period. Today, the energy sector has seen 25% of the companies' estimates reduced.

Clearly, part of the reason for the recent energy stock earnings reductions is associated with the pullback in crude oil and natural gas prices. Without analyzing every one of the earnings reductions, it is hard to know if there might be other factors that have impacted the estimates. We suspect that most of the reductions are related in one way or another to the pullback in commodity prices. For example, besides just lower prices, producers who used hedges to lock in specific prices for their oil and gas production may have lost money as lower prices force companies to mark down the value of these hedges to their current market value when the companies report earnings. We may also have had earnings reductions caused by delay in the timing of new oil and gas projects coming on stream. On the other hand, when we look at the oilfield service companies' earnings reductions, their earnings reductions are more likely related to analysts reassessing their view of the growth rate for drilling and production-related work combined with delays in certain projects starting up on schedule, or new drilling rigs being delivered on time.

The financial stocks are generating better earnings results, and thus earnings estimates are increasing as interest rates fall, the bulk of the charge-offs for overvalued assets are completed and the quality and quantity of corporate and personal loan volume begins to grow. The bottom line is that the financials have weathered possibly their worst earnings period in a life-time. As this period unfolded, analysts, who had been constantly surprised by the degree of earnings weakness, slashed their estimates. Now that a recovery in the financial sector's earnings results appears underway, albeit a tenuous one, the analysts have been slow to upgrade their earnings projections for the companies. What we are seeing in the Bespoke data is the early stage of the analysts moving their financial company earnings estimates higher.

Exhibit 3. Commodities Are Still In A Long-term Bullish Phase



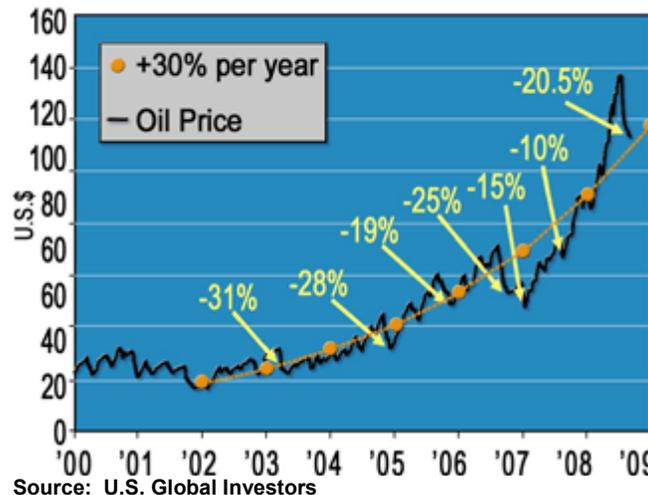
Source: Stifel Nicolaus & Co., Stifel Nicolaus format, data Historical Statistics of the United States, a U.S. Census publication, EIA, USDA. 2008E data point incorporated into the last 10-year moving average was March-2008 over March-2007.

Source: U.S. Global Investors

By the history of past commodity cycles, the current cycle is still quite young

This dichotomy in earnings estimate adjustments between the energy and financial sectors largely explains the relative price performance of the two groups. Many investors are still of the view that energy has a positive outlook for a number of years into the future. They view the current price pullback as a healthy correction in a secular bull market and that investors should be buying the energy and energy service stocks. The chart in Exhibit 3, showing the trend in a group of commodity prices over the past 200 years, clearly shows that there have been a number of long commodity cycles. By the history of past commodity cycles, the current cycle is still quite young. Even though the cyclical pullback in crude oil prices has been more than 25%, it is not unusual for this magnitude of a price correction during a bull market. Healthy price corrections are a fundamental trait for sustaining market cycles – whether they are stocks, interest rates or commodities.

**Exhibit 4. Significant Corrections Can Happen In A Bull Market
World Crude Oil Price**



We would caution that periods of cyclical corrections can last for a much longer time than anyone can image

While it is always difficult to predict stock market trends or to know how long industries will remain in investor favor, we suspect we have not heard the last of this commodity cycle. While some readers may take that as an endorsement for buying energy stocks, we would caution that periods of cyclical corrections can last for a much longer time than anyone can image. We won't, and can't, forecast how long this correction may last. Yet when we look at the long-term underlying industry fundamentals for the energy business, we see profitability for a number of years in the future. Just don't ask us to tell you when the recovery will start.

TV Talking Heads Truly Are Cheerleaders

After a three-day run of falling oil prices, they started climbing early on the fourth day. We were watching CNBC and did a double-take when we heard one of the anchors make the point that oil prices

were rising when they should be falling. This was after Hurricane Gustav resulted in a sharp correction in oil and gas prices because it didn't cause the amount of damage to the oil and gas producing infrastructure anticipated by the futures market in the several days before Labor Day weekend. But that morning after oil futures prices started to retreat, the talking head said with a dead serious tone, "Oil prices are behaving themselves."

I guess as long as commodity prices do what CNBC thinks they should do then everything is fine

I guess as long as commodity prices do what CNBC thinks they should do – largely because they have never gained a real understanding of the workings of the oil and gas business, or any of the other commodity-based industries for that matter – then everything is fine. From this comment, you can understand the frustration CNBC talking heads have experienced for the past year. My secret hope (not any more) is that they become frustrated once again.

Crude Oil and Natural Gas Prices Decoupled

Traditionally investors and industry participants used a 6-to-1 ratio to value oil and gas

There is a heating value ratio between crude oil and natural gas. That ratio states that the amount of heat value (BTUs) in a barrel of crude oil is approximately 5.8 times the amount contained in a thousand cubic feet (mcf) of natural gas. Put another way, 5,800 cubic feet of natural gas would give you the same BTUs as one barrel of crude oil. Traditionally investors and industry participants used a 6-to-1 ratio to value oil and gas (it is easier to do the math in your head). Thus, if oil is trading at \$100 a barrel then the heating value of a mcf of gas would suggest its price should be about \$16.67. Seldom has this ratio worked in reality. For many years the ratio held more in the range of 10 times, or \$10 per mcf as the price-parity with oil at \$100 a barrel.

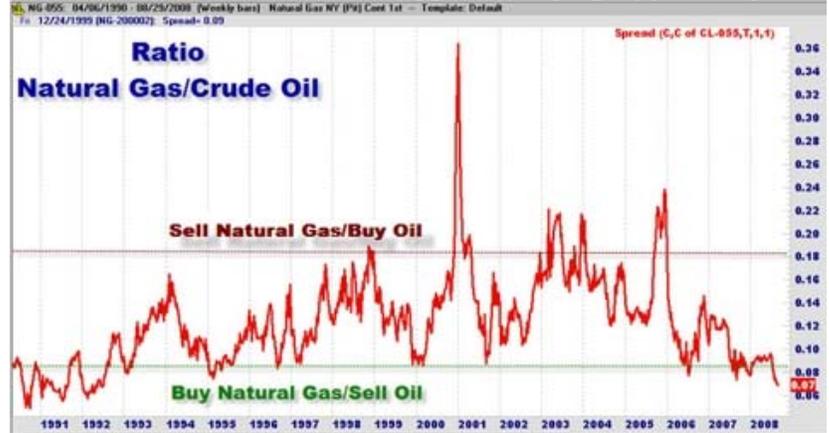
When this ratio falls below roughly 8% (0.08) then natural gas becomes so cheap it should be bought with the confidence that it will soon increase in value

The chart in Exhibit 5 shows the history of this ratio of the price for a mcf of natural gas with that of a barrel of oil since 1990. The chart shows that when this ratio falls below roughly 8% (0.08) then natural gas becomes so cheap it should be bought with the confidence that it will soon increase in value. Likewise, whenever the ratio goes above about 18%, then oil becomes too cheap and either natural gas should be sold or oil should be purchased. The swings outside of the channel between 8% and 18% for the gas/oil price ratio suggest times of extreme pricing disparity between these two fuels.

What the chart also shows clearly is the modern history of natural gas markets. In the early years – 1990-1993 – the U.S. gas market was in an extended period of oversupply. That time was marked by an oversupply of natural gas, which had initially been referred to as a "gas bubble." As the oversupply period continued, that era became known as the "gas sausage." During those days, domestic natural gas prices hovered in the \$1 per mcf range, too low to generate significant activity in any areas where the cost to find, develop and produce gas was high. As a result, activity in the Gulf of Mexico fell to extremely low levels

prompting investors and industry participants to refer to it as the Dead Sea.

Exhibit 5. Low Gas/Oil Ratio Suggest A Buying Opportunity

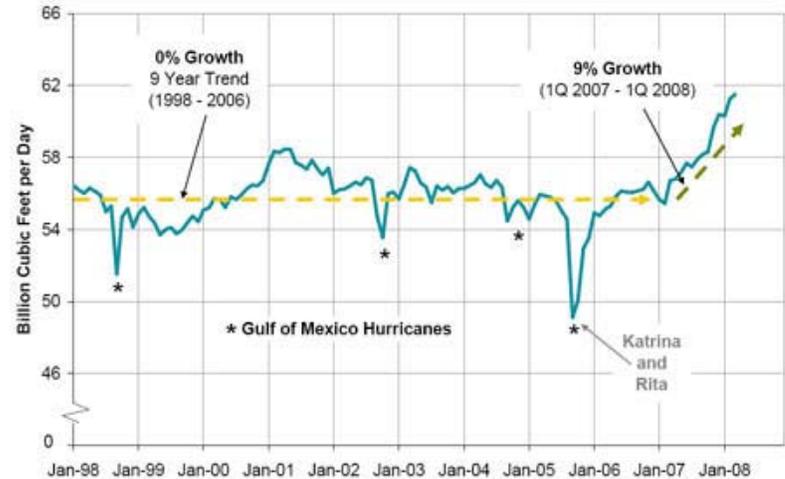


Source: Agora Financial

One can see the impact on gas prices associated with the devastation of offshore oil and gas producing facilities by hurricanes Katrina and Rita

At the other end of the time spectrum on the chart, one can see the impact on gas prices associated with the devastation of offshore oil and gas producing facilities by hurricanes Katrina and Rita. With the loss of a substantial amount of U.S. natural gas production just at the cusp of the winter heating season, natural gas prices spiked higher and eventually reached levels that made natural gas overvalued compared to crude oil. At that point, gas should have been sold and oil bought.

Exhibit 6. Gas Production Growth Is Surprising The Industry



Source: Energy Information Administration, Office of Oil and Gas, Form EIA-914 Monthly Natural Gas Production Report

Source: EIA

The current gas price collapse, which started in the summer of 2007, reflects the impact of a dramatic rise in natural gas production – phenomenon that few observers expected given the historical record

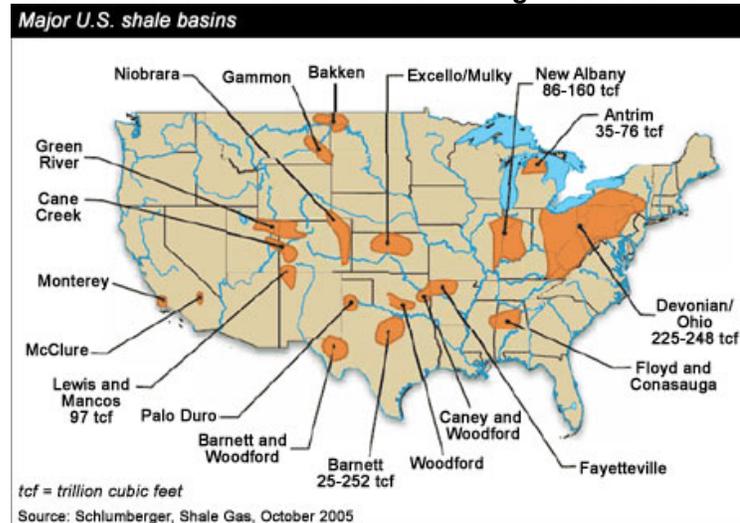
At the present time, this rapid production growth rate, even though it has a very short history, is assumed to be an assured trend

This level of commitment by BP, at roughly \$14,000 per acre, suggests that there is likely not going to be any material slowdown in drilling in this field in the near term even in the face of lower natural gas prices

of the E&P industry being unable to grow production. This recent growth has come as a result of the successful exploitation of gas shale formations in various regions of the country. According to recent figures from the Energy Information Administration (EIA), domestic natural gas production is growing at about an 8%-9% annual rate. At the present time, this rapid production growth rate, even though it has a very short history, is assumed to be an assured trend. But if gas prices continue to stay in the low \$7 per mcf range, the high cost of these gas shale reserves may choke off some of their development. Furthermore, these wells seem to have very high rates of depletion suggesting that the greater the volume of gas shale production in the total industry supply, the faster the E&P industry will need to work in the future in order to sustain existing production, let alone grow it.

What is interesting and somewhat perplexing has been the recent purchases of acreage in some of the newer gas shale plays by major oil companies. The most recent was BP Ltd.'s (BP-NYSE) purchase of about 400,000 acres in the Haynesville shale for \$1.9 billion from Chesapeake Energy Corp. (CHK-NYSE). The deal was structured not only as an asset purchase (\$1.1 billion), but also as a funding commitment for drilling. BP will pay \$800 million of the cost to drill and complete wells in the field. This level of commitment by BP, at roughly \$14,000 per acre, suggests that there is likely not going to be any material slowdown in drilling in this field in the near term even in the face of lower natural gas prices.

Exhibit 7. Unconventional Gas Is Driving Production Growth



The recent fall in natural gas futures prices has been driven by the fear that the U.S. gas market will be more like the 1990-1993 market than the 1995 or 2006 markets. Should this winter turn out to be warmer than normal (more in line with the seasonal outlook forecast of the National Oceanic and Atmospheric Administration) and the economy weaker than anticipated, we could see a more extended

Low natural gas prices will result in reduced oilfield activity that will mean less new gas production in the future

period of weak gas prices. Of course, on the basis of the gas-to-oil price ratio, the continued fall in crude oil prices may mitigate somewhat the price weakness problem associated with natural gas. But as often happens oil and gas markets can be self-correcting. As we have found out recently with crude oil prices, the solution for high prices has been high prices! Likewise, low natural gas prices will result in reduced oilfield activity that will mean less new gas production in the future. Ultimately that will benefit the industry by boosting natural gas prices down the road, i.e., low gas prices produce higher gas prices. The only issue is how far down that road is that inflection point?

Falling Oil, Gasoline Prices Drive Sentiment: A Turning Point?

A recent event highlighting this attitudinal shift was the vote by the Santa Barbara city council to support drafting a letter to be sent to federal and state officials favoring removing the restriction against offshore oil and gas drilling, especially along the California coast

The battle over the Democratic and Republican Parties' views of America's energy future continue to heat up following the completion of the two party conventions. The energy debate was further highlighted by the selection of Gov. Sarah Palin of Alaska as the Vice Presidential nominee of the Republican Party. The polling efforts that have been running wild since gasoline prices soared this spring have clearly shown a dramatic shift in attitudes in favor of government actions to boost domestic energy supplies and possibly to minimize the impact of greenhouse gas emission controls on energy availability and its price. A recent event highlighting this attitudinal shift was the vote by the Santa Barbara city council to support drafting a letter to be sent to federal and state officials favoring removing the restriction against offshore oil and gas drilling, especially along the California coast. This policy shift from the site of the infamous Santa Barbara oil spill in 1969 and the poster child for opposition to offshore drilling was surprising, but not totally unexpected. The question is whether the shift in attitudes toward favoring offshore drilling will be muted by the drop in oil prices.

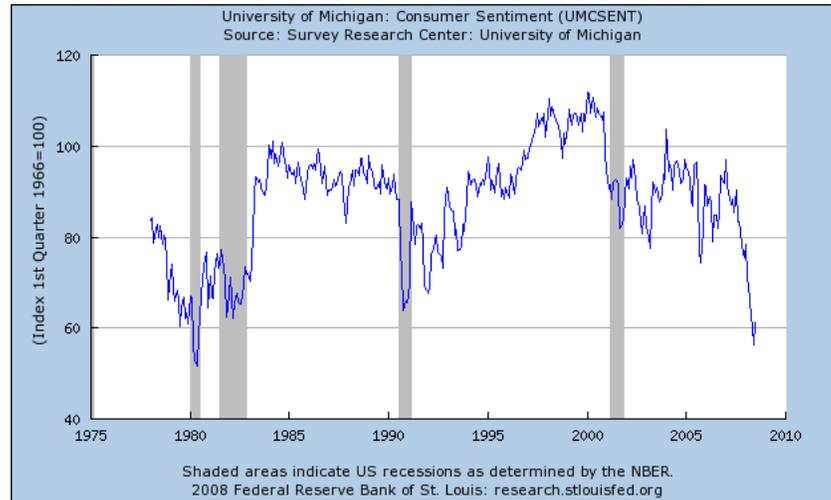
The drop in gasoline pump prices has also boosted consumers' expectations for the short-term trend in inflation

The recent slump in crude oil prices coupled with a slide in gasoline pump prices is acknowledged as the spark that has boosted U.S. consumer sentiment. According to the preliminary data from the University of Michigan Consumer Sentiment Survey, the August index value has risen to 61.7 from July's 61.2. If the final monthly data is consistent, it would mark the second straight monthly rise in the index since its low of 56.4 was registered in June. Based on some of the answers to questions contained in the latest survey, the drop in gasoline pump prices has also boosted consumers' expectations for the short-term trend in inflation. With oil prices continuing to fall (as of September 5), one would have to believe that consumer sentiment will continue to improve, although the falling stock market doesn't help.

A number of public opinion polls taken in late July and early August have signaled a huge shift in the attitude of Americans toward offshore drilling despite the opposition of a number of highly influential state and federal elected officials. In July, a CNN/Opinion Research poll showed that 69% of those surveyed supported

offshore drilling while only 30% were opposed. Likewise, an early August poll by Rasmussen Reports showed that there was 64% support for drilling and only 20% of respondents opposed. In that same poll, 55% of those surveyed said they favored Sen. John McCain's proposal to construct new nuclear power plants to help wean the country off foreign energy sources.

Exhibit 8. Consumer Sentiment Bottoms Above 1980 Low



Source: St. Louis Federal Reserve Bank

In California a huge sentiment shift was observed among Independents with 44% now supporting offshore drilling, up from 33% a year ago

In the hotbed of the offshore oil debate, California, a July poll taken by the Public Policy Institute of California showed that 51% of residents favored opening up the offshore coast to drilling. What was interesting was the level of support by political affiliation. Among registered Republicans some 77% favored offshore drilling, up from 60% in a similar poll taken a year ago. On the other hand, only 35% of registered Democrats favored the shift, but that was still six percentage points higher than a year earlier. Maybe most importantly, a huge sentiment shift was observed among Independents with 44% now supporting offshore drilling, up from 33% a year ago.

California is the home of two of the leading Democratic opponents of opening up more of the U.S. Outer Continental Shelf to exploration – Speaker of the House Nancy Pelosi and Sen. Barbara Boxer. When interviewed about the survey results, Sen. Boxer suggested that the wrong question was being asked and if the right one was posed the public support would be quite different. As she put it, "The appropriate question is if you knew you could get more energy from efficiency and clean technologies such as solar, wind and geothermal, would you rather do that or drill along our pristine coast and risk harming a multibillion-dollar tourism, fishing and recreation economy." Sen. Boxer is the chairwoman of the Senate Environment and Public Works Committee which has a lot to say about our national energy policy, and she certainly used every emotion-generating word in her phrasing of the question.

Speaker Pelosi has begun to soften her opposition to a vote

Speaker Pelosi has been the focal point of the debate over offshore drilling. Because she is opposed to drilling and she controls the House of Representatives' legislative agenda, she has prevented any Congressional vote over the issue of offshore drilling. With public sentiment beginning to race ahead of the politicians, especially the anti-drilling Democrats, Speaker Pelosi has begun to soften her opposition to a vote. She now says that as part of a balanced energy plan, she would consider allowing a vote on offshore drilling. But her recent performance (August 24th) on the Sunday news show, Meet the Press, raises questions about how out of touch with the energy issue she really is.

What was most ironic was that her interview came a day before a federal court upheld a decision mandating the repayment by California of the \$1 billion in bonuses the oil companies paid for offshore leases

The moderator, Tom Brokaw, cited recent polling data that showed the American public thought Congress's lack of effective action on energy was almost as responsible for the recent high gasoline prices as the actions of big oil companies. Speaker Pelosi made her, and the Democratic Party's, standard argument that if you drill offshore today there will be no impact on gasoline pump prices for 10 years, and then only 2-cents per gallon. She also talked about the profits the oil companies are making by producing American oil and claimed the industry is not paying royalties. What was most ironic was that her interview came a day before a federal court upheld a decision mandating the repayment by California of the \$1 billion in bonuses the oil companies paid for offshore leases secured in the late 1970s and early 1980s that they were blocked from developing due to the state's change in offshore leasing laws.

What drew greater interest from both the media and viewers was Speaker Pelosi's seemingly inability to recognize that natural gas is a fossil fuel

Speaker Pelosi went on to talk about the positive pump price impact the release of crude oil from the Strategic Petroleum Reserve would have. In her view, this action would drive pump prices lower in a matter of ten days while offshore drilling wouldn't impact for ten years. There are a number of people who might disagree with her assessment. But what drew greater interest from both the media and viewers was Speaker Pelosi's seemingly inability to recognize that natural gas is a fossil fuel.

During the show Speaker Pelosi mentioned natural gas as a clean alternative fuel. Mr. Brokaw asked her about an investment she and her husband had made in Clear Energy Corp. (CLNE-NASDAQ), the company founded by T. Boone Pickens that markets compressed natural gas and liquefied natural gas for use in motor vehicles. Mr. Pickens, as most know, has been promoting his energy plan that would entail building huge wind farms through the middle of the country to generate electricity and thus allow us to take the natural gas currently firing electric generators and use it to fuel vehicles enabling the country to reduce its imports of foreign oil. When questioned about natural gas, Speaker Pelosi talked about natural gas as a transition fuel from fossil fuels to alternatives. As she said, "You can have a transition with natural gas....that is cheap, abundant and clean compared to fossil fuels." She later stated, "I believe in natural gas as a clean, cheap alternative to fossil fuels."

One of her spokesmen came to her defense amidst the uproar that

What Speaker Pelosi demonstrated quite clearly is that our professional politicians are so focused on their number one job – getting re-elected – that they fail to take advantage of the experts available to them to become better educated on possibly the most important strategic issue challenging this country's future

developed later on the blogs. “She knows it [natural gas] is a fossil fuel but includes it because compared to other fossil fuels (coal and oil) it burns more cleanly,” said Pelosi’s spokesman, Brendan Daly. “Also, it is plentiful domestically and cheaper.” What still seems to be left out of this discussion is that the U.S. is not totally self-sufficient in natural gas, despite the acceleration in production growth due to the successful exploitation of the various shale plays in the country. Secondly, we have to drill for natural gas just as we do for crude oil and often natural gas resources lie offshore. While some in the general public may think natural gas comes from the atmosphere like solar and wind power, most people understand that natural gas is a fossil fuel and it comes from under the ground. What Speaker Pelosi demonstrated quite clearly is that our professional politicians are so focused on their number one job – getting re-elected – that they fail to take advantage of the experts available to them to become better educated on possibly the most important strategic issue challenging this country’s future.

The energy debate has evolved further with the nomination of Gov. Palin (R-AK) who challenged the Republican political establishment, fought corruption in the Alaskan Oil and Gas Commission and challenged the major oil companies operating in the state. In recent months she has worked to develop a plan to build the long-delayed Alaskan natural gas pipeline to bring to market the 30 Tcf of natural gas reserves sitting in Prudhoe Bay. Gov. Palin also wants to drill in the Alaska National Wildlife Reserve (ANWR), something her ticket mate does not favor. Whether she can convince Sen. John McCain (R-AZ) that drilling in ANWR should be part of a broad-based plan for solving our energy challenge remains to be seen.

Could legislation that opens up more drilling offshore and in ANWR be the catalyst that stimulates renewed investor interest in energy stocks?

According to polling data, while Americans are not totally sold on ANWR drilling, a strong majority still supports doing so. A Zogby poll taken in late June found that 59% of likely voters favor drilling in ANWR. Interestingly, there was strong support from independents (57%) and even Democrats (40%). A Pew Research poll taken about the same time showed ANWR drilling support at about 50% with those opposed at only 43%. A FoxNews/Opinion Dynamics poll found 53% supported ANWR drilling while a recent ABC News/Planet Green/Stanford University found 55% of surveyed people responded favorably to the question that the U.S. government should “allow drilling for oil in U.S. wilderness areas where it’s currently not allowed.” About 43% of those surveyed were opposed. At the present time, drilling in ANWR is not in any of the proposed compromise energy plans that are being pushed in Congress. Could legislation that opens up more drilling offshore and in ANWR be the catalyst that stimulates renewed investor interest in energy stocks?

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