PPHB

ENERGY INVESTMENT BANKING

MUSINGS FROM THE OIL PATCH

November 6, 2012

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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 and planning for the future. The newsletter is published every two weeks, but periodically events and travel may alter that schedule. As always, I welcome your comments and observations.* Allen Brooks

Green Energy, The Presidential Debates And Labor IG's Audit

The philosophical differences between President Barack Obama and Republican candidate Mitt Romney regarding the role of government in our nation's energy program were clearly displayed during the debates

The topic of energy policy played a more prominent role in the three presidential debates than it has in past election cycles. The philosophical differences between President Barack Obama and Republican candidate Mitt Romney regarding the role of government in our nation's energy program were clearly displayed during the debates. Many people remember the lively exchange between the two men during the first debate over the issue of the growth of domestic oil and gas production and issuing permits for drilling on federal lands.

Another exchange during the second debate involved Mr. Romney's criticism of President Obama's rejection of the permit to build the Keystone XL oil pipeline to bring Canadian oil sands bitumen to the U.S. Gulf Coast. President Obama responded saying, "And with respect to this pipeline that Governor Romney keeps on talking about, we've – we've built enough pipeline to wrap around the entire earth once. So I'm all for pipelines. I'm all for oil production."

Only about 17% of the pipeline miles we found were for hazardous liquids, including crude oil, natural gas liquids and petroleum products

One fact-checker pointed out that the President Obama's statement was accurate based on his examination of the figures published by the Pipeline and Hazardous Materials Safety Administration of the federal government. He found that between the beginning of 2009 and the end of 2011, there were 43,000 miles of oil and gas pipelines built, which handily exceeds the circumference of the earth, which is merely 24,901 miles around. We checked the same data source and came up with a total of 49,718 miles of new pipeline put in place for all fossil fuels between the end of 2008 and 2011. Importantly, only about 17% of the pipeline miles we found were for hazardous liquids, including crude oil, natural gas liquids and petroleum products. The overwhelming miles of pipe laid during those years was for natural gas, and then primarily for gas gathering

in producing fields and gas distribution to new homes and businesses. Since Mr. Romney was discussing an oil pipeline, the roughly 8,600 miles of liquid fuel pipelines built during the Obama administration is only a third of the earth's circumference.

According to the article, the Obama Council of Economic Advisors said that the stimulus money had either created or preserved 225,000 jobs through the third quarter of 2010

A third energy policy issue debated involved the Obama administration's funding of renewable energy companies and their impact on the creation of 5 million green jobs over the next decade promised by then-candidate Obama in 2008. When President Obama re-energized his green jobs plan in the early summer of 2011, an article by Darren Samuelsohn and published by *Politico* said there was an effort underway by the administration to quantify the impact of the share of $80 billion of stimulus spending directed toward the clean energy business and the creation of new green jobs. According to the article, the Obama Council of Economic Advisors said that the stimulus money had either created or preserved 225,000 jobs through the third quarter of 2010. Mr. Samuelsohn said the White House was forecasting 825,000 Americans would be working building electric car batteries, retrofitting homes to reduce energy use, and other green jobs by the end of 2012.

The IG's conclusion was that these programs have failed on most key jobs measurements

Within the past two weeks, the Department of Labor's Inspector General (IG) reported on an audit his department performed on the key green jobs training programs, which were part of President Obama's stimulus plan. The IG's conclusion was that these programs have failed on most key jobs measurements. The audit found the programs were training workers who already had jobs that didn't require green energy skills and were failing to place new trainees in jobs once they finished training. The IG also found that the grantees who received the jobs-training funding did a poor job of reporting their results.

Following the IG's initial report release, the ETA extended 46 of the 63 Pathways and ETP grant periods of performance set to expire in January 2012 from 2 months to 1 year to allow grantees additional time to expend funds and assist participants with training and employment

In his new report, issued October 25, 2012, the IG began by citing the report his department issued on September 30, 2011, titled the "Recovery Act: Slow Pace Placing Workers into Jobs Jeopardizes Employment Goals of the Green Jobs Program." The conclusion from that report was that many of the grantees "might not be able to meet their planned expenditures or goals for placing participants before grant periods expired." The Employment and Training Administration (ETA) arm of the Department of Labor said it expected grantees' performance to increase significantly and that all funds would be expended by September 30, 2013. Following the IG's initial report release, the ETA extended 46 of the 63 Pathways and ETP grant periods of performance set to expire in January 2012 from 2 months to 1 year to allow grantees additional time to expend funds and assist participants with training and employment. Furthermore, ETA extended nine of the 34 SESP grants set to expire in January 2013 by five to six months. The message from this effort suggests that when the money is available but the trainees aren't, extend the program.

Part of the reason why the audit may not have been more solid was the "inability of sampled grantees to document between 24 percent and 44 percent of their reported employment outcomes"

The IG highlighted the report's methodology, which involved analyzing "reported performance outcomes and expenditures for the universe of 97 training grants totaling $435.4 million based on grantee data as of June 30, 2012." He went on to state that they "selected a statistical sample of eight grants totaling $40.1 million and covering 9,510 participants served." He then went on to qualify some of his conclusions: "While statistically selected, the results of audit tests for the 463 participants selected at sampled grantees are only projectable to the sample of 8 grantees." Part of the reason why the audit may not have been more solid was the "inability of sampled grantees to document between 24 percent and 44 percent of their reported employment outcomes." It was this lack of certified data that the administrator of the training program pointed to when she disagreed with the conclusions of the inspector general's report.

The following three paragraphs are the key conclusions from the inspector general's report:

"**Participants Served.** Grantees collectively reported serving 113,247 participants, or 90 percent of the targeted 126,493 participants. Of the participants served, 52,890 (47 percent) were incumbent workers, meaning the participants were already employed when they entered the program. Also, of those served, 84 percent were male, 45 percent were high school graduate or equivalent, and 44 percent had college or vocational school education. Grantees reported 49 percent of the participants were individuals in need of updated training related to the energy efficiency and renewable energy industries. Other individuals served included: the unemployed (42 percent); disadvantaged workers within areas of poverty, and seeking employment out of poverty and into self-sufficiency (22 percent); those impacted by the National Energy and Environmental Policy (10 percent); those with criminal records (9 percent); and veterans (7 percent)."

The reported number retained of 11,613 represents only 16 percent of the planned retention goal of 71,017

"Entered Employment and Retention. Out of a target of 81,254, grantees collectively reported 30,857 participants (38 percent) entered employment. While grantees reported that 49 percent of participants who obtained jobs retained employment for at least 6 months, the reported number retained of 11,613 represents only 16 percent of the planned retention goal of 71,017. The low retention rate may be in part attributable to the timing of placement. For participants placed in the quarter ending June 30, 2012, retention information will not be available until the quarter ending December 31, 2012."

"**Incumbent Workers.** Of the 81,354 participants who completed training, 42,322 (52 percent) were incumbent workers. Grantees were authorized to train incumbent workers who needed training to secure full-time employment, advance their careers, or retain their current jobs. However, for the 81 incumbent workers we identified in

our sample, we found no evidence that they needed green job training for any of these purposes."

The IG concluded, "Outcomes for participants were far less than originally proposed"

While the government's efforts to train people for new jobs are noble, the program's success has been less than stellar. The government earmarked more than $400 million for green jobs training programs, and $328.5 million has been spent so far. Based on the training and employment outcomes and the money expended, the IG concluded, "Outcomes for participants were far less than originally proposed." This conclusion was challenged by Jane Oates, assistant secretary for employment and training in the Department of Labor. She pointed out that some of those who got training found jobs before their training was completed and they should be counted. For us, Ms. Oates is like the college coach who complains about the NCAA's graduation standard when he says, I had players leave early to go into the professional ranks, I shouldn't be penalized for that. If we are measuring my performance on whether I prepared student-athletes to secure jobs, those professional players should be counted as successes.

With their failure many green jobs have been lost

The bigger problem for the green jobs training program is that solar and wind power suppliers are going bankrupt, despite massive government loans and guarantees. With their failure many green jobs have been lost. Reversing that trend requires building a renewable energy business that produces power at a much more competitive price – something we anticipate the industry can do and will do. In the meantime, government accountants will spend hours and lots of money trying to count green jobs.

Gasoline Prices Remain Political Issue But Not Ethanol

We were told several weeks ago that the Department of the Interior and the Environmental Protection Administration (EPA) were on "lock-down" until after the November 6th election

When confronted with a "hot potato" political issue, bureaucrats and politicians have a rule: drop back and punt. Some are less dramatic and merely kick the can down the road. These are good strategies, especially during an election campaign, when confronted by a decision that would upset one or more constituent voting groups. We were told several weeks ago that the Department of the Interior and the Environmental Protection Administration (EPA) were on "lock-down" until after the November 6th election. Maybe all federal government agencies are in that position, we just don't know. No speeches, no interviews, no rules issued – nothing that could possibly upset anyone or become a hot potato is the mandate for these bureaucrats.

Therefore, we were not surprised to read an editorial in the October 30th issue of *The Wall Street Journal* that the EPA a week ago last Thursday asked for another 90-day extension, its third so far, before responding to a petition from the Competitive Enterprise Institute and Action Aid requesting a review of the renewable fuel standard that mandates 13.8 billion gallons of corn ethanol be blended into

the nation's gasoline supply next year. That petition was filed with the EPA last October, fully a year ago, and required the agency respond in 90 days as required under all EPA rule-making.

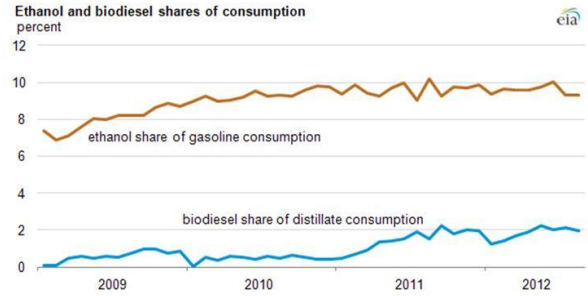
The mandate, which means one in every four bushels of American corn grown is used to produce motor fuel at a time when other fuels exist, helped drive corn futures prices from about $6 to $6.50 per bushel to over $8 per bushel in the July-August period

Corn ethanol is a political hot potato. Nearly every politician who campaigns in the farm state of Iowa is for the mandate since it provides support for corn prices and therefore local farmers. The ethanol mandate got a little out of hand this summer as the Great Midwest Drought severely damaged the nation's corn and soybean crops sending their prices shooting skywards. The mandate, which means one in every four bushels of American corn grown is used to produce motor fuel at a time when other fuels exist, helped drive corn futures prices from about $6 to $6.50 per bushel to over $8 per bushel in the July-August period. Even today, corn futures prices are around $7.50 per bushel, which is down from the late summer peak, and well above the prices of the past year.

One problem with the ethanol mandate is the shrinking demand for gasoline

One problem with the ethanol mandate is the shrinking demand for gasoline as cars become more fuel-efficient and drivers drive fewer miles causing the refining industry to hit the blending wall, meaning ethanol now regularly accounts for about 10% of the motor fuel supply. While the mandate calls for more ethanol volumes to be produced, and presumably consumed, the EPA and the ethanol industry have been struggling how to promote the newly approved 15% blending requirement for gasoline for use in new cars and to soak up the extra ethanol output.

Exhibit 1. Ethanol Facing Blending Wall



Source: EIA

As of August 2012, only one retailer in Kansas had announced it has E15 for sale

In 2011, the EPA approved the use of 15% ethanol blends (E15) in all light-duty vehicles from model years 2001 or later. Many ethanol producers have been approved by the EPA to sell their ethanol for blending into E15, but as of August 2012, only one retailer in Kansas had announced it has E15 for sale.

A major problem for gasoline retailers is that E15 does not work in, and can severely damage, small engines such as those in motorcycles, lawnmowers and boats. As a result, retailers are hesitant to sell the E15 blend because of the potential liability from damage to these engines, along with possible problems with vehicle warrantees of slightly older vehicles that accidentally use E15.

A buyer of a small amount of E10 who follows an E15 buyer could find as much as a quart of additional ethanol in his fuel supply

Since most retail gasoline stations are not able to install separate E15 pumps, their existing pumps must be able to dispense both E10 and E15 blends. This creates another potential liability problem for a retailer. A buyer of a small amount of E10, such as a one- or two-gallon can's worth for his small engine or a few gallons for a motorcycle, who follows an E15 buyer could find as much as a quart of additional ethanol in his fuel supply, pushing the ethanol content well beyond the E10 maximum his engine will tolerate.

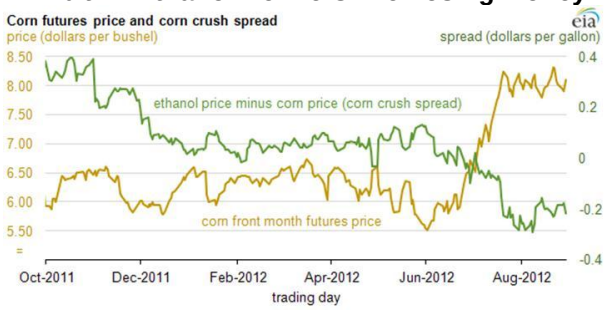
We are going to need a gasoline-can police force to prevent customers from buying too little E10 gasoline at a time

To attempt to address the liability issue, the "brains" at the EPA came up with a rule that buyers of E10 from pumps that can disperse E15 must buy a minimum of four gallons. We assume this means the sale of any approved gasoline container smaller than four gallons will be outlawed, á la Mayor Mike Bloomberg of New York City and the banning of the sale of any 16-ounce sodas. Think about the potential problem a person trying to fuel up his rental car might have when he hasn't used four gallons of fuel. Forget the health care rationing panels under Obamacare; we are going to need a gasoline-can police force to prevent customers from buying too little E10 gasoline at a time.

The high price of corn is also negatively impacting the profitability of ethanol refiners

Possibly a bigger problem for refiners is that the price of corn continues to remain high bringing on the wrath of politicians and government leaders around the world who criticize the U.S. motor fuel industry for driving up global food costs. The high price of corn is also negatively impacting the profitability of ethanol refiners. The EIA prepared an analysis of ethanol refiner profitability at the end of August when the impact of high corn prices due to the drought was very topical. The EIA plotted the "corn crush spread," which measures the price of ethanol minus the price of corn, against the front-month futures price for a bushel of corn.

Exhibit 2. Ethanol Refiners Are Losing Money



Source: EIA

In early August, an ethanol refiner was losing nearly $0.30 per gallon

As shown in Exhibit 2, when the impact of this summer's drought on the corn crop became evident, corn futures prices shot up from $5.50 per bushel to over $8. As that happened, the corn crush spread, which had been marginally profitable since last December, fell into negative territory. In early August, an ethanol refiner was losing nearly $0.30 per gallon if it ignored any money it might earn

Today, the corn crush spread is about a negative $0.31 per gallon

from selling the leftover feedstock and other by-products. Clearly, the corn price rise had hurt the profitability of ethanol refiners. Today, the corn crush spread is about a negative $0.31 per gallon, so the conditions that developed a few months ago have not changed. Without a boost in ethanol demand from a higher blending requirement, the mandated increase in ethanol output in 2013 will further pressure ethanol refiner profitability.

E10 is known to cost vehicles about 3-4% of their fuel efficiency

To understand the morass of regulatory complexity, the Obama administration is trumpeting the negotiated increase in corporate average fuel efficiency (CAFE) standards to 54.5 miles per gallon by 2025 for light vehicles. As we have written before, the auto manufacturers measure their vehicles' performance by using fuel without ethanol. E10 is known to cost vehicles about 3-4% of their fuel efficiency, meaning that while a car company certifies its vehicle achieves X miles per gallon, the buyer only achieves 96%-97% of that average fuel economy in the real world no matter how hard he tries. How much more fuel efficiency is lost when you have to use E15? With each conflicting ethanol and fuel efficiency mandate the EPA hands down, it merely hands a larger rock to every American to haul around.

Media's View Of Oil Industry Experts Is Highly Questionable

According to the article's author, "regulatory and environmental experts" oppose the plan because they perceive it could open the door to lax oversight of the oil industry

Last week, the *Financial Times* wrote an article with the headline "Experts attack plan to speed oil permits." The thrust of the article was to critique a proposal by Republican presidential candidate Mitt Romney to give states authority over oil drilling and permits on federal lands. According to the article's author, "regulatory and environmental experts" oppose the plan because they perceive it could open the door to lax oversight of the oil industry. Once you read the article it becomes evident that the "experts" are Michael Bromwich and Heather Taylor-Miesle, people with clear agendas not supportive of the oil industry.

Mr. Bromwich now is a litigation partner with the law firm of Godwin Procter in its Washington, D.C. and New York City offices. He is also the Founder and Principal of The Bromwich Group, a consulting firm that offers crisis management and strategic advisory services, as well as more specialized services relating to offshore energy and law enforcement. Before these positions, he was the head of the Minerals Management Service and was tasked with reorganizing the agency to deal with its organizational shortcomings such as conflicts of interest in supervising offshore regulatory inspections, sloppy stewardship of Indian royalty income, and the ineffective granting of offshore drilling and production permits. These problems contributed to the firing of employees for their laxness in supervision and conflicts of interest, which some believe created a permissive drilling regulatory environment linked to the Deepwater Horizon disaster and resulting Macondo oil spill. Ms. Taylor-Miesle is the director of the NRDC Action Fund, the activist arm of the

environmental group National Resource Defense Council that is a strong opponent of the oil and gas industry.

The criticisms of Mr. Romney's energy proposals focused on: 1) the development of a "fast-track" process with fixed timelines for regulators to approve exploration and development permits that "significantly increased" the risk of another Macondo; 2) the delegation of permit-granting authority to the individual states creates a "race to the regulatory bottom" in which companies choose where to operate based on the most permissive regulations; 3) the inability of state governments to attract and compensate skilled personnel required to conduct reviews; and 4) the "uneven laws and oversight" that could lead to increased litigation between states.

So, we have an "expert" who hasn't read Mr. Romney's plan, but is quick to offer a criticism

The last criticism was specifically cited by Ms. Taylor-Miesle as a risk in the event of an offshore spill that affected another state's land. The only problem with her argument is that Mr. Romney's proposal would be restricted to state control of drilling and permitting onshore, not offshore. The offshore regulatory responsibility would remain with the federal government. So, we have an "expert" who hasn't read Mr. Romney's plan, but is quick to offer a criticism.

Permissiveness may actually reflect greater local knowledge such that extraneous rules and regulations are not needed

The other three criticisms were cited by Mr. Bromwich. His first one raises the question of knowledge versus competency. If the reviewers are trained they should be able to approve or disapprove a permit application within a reasonable time. Plus, the timelines would have to be agreed upon by BSEE and the industry. The idea that the oil and gas companies view permissive regulation as an ingredient for successful operations really depends on the regulators. Permissiveness may actually reflect greater local knowledge such that extraneous rules and regulations are not needed. That does not make the regulation any less safe, but it may make the state more attractive since it could lead to less costly operations, without sacrificing safety. Lastly, to suggest that only the federal government pays enough to attract top quality regulators is a stretch, since we know the Interior Department had to request an exemption from federal pay scales in order to compete on salary with the industry while trying to hire petroleum engineers.

What we recognized in the arguments attributed to these so-called "experts" is the foundation of arguments to be made in the next major energy war – hydraulic fracturing. These criticisms are the backbone for why activists and environmentalists desire the federal government regulate hydraulic fracturing activity in order to insure it is conducted "safely."

Gulf of Mexico Is In A Growth Mode – Will It Continue?

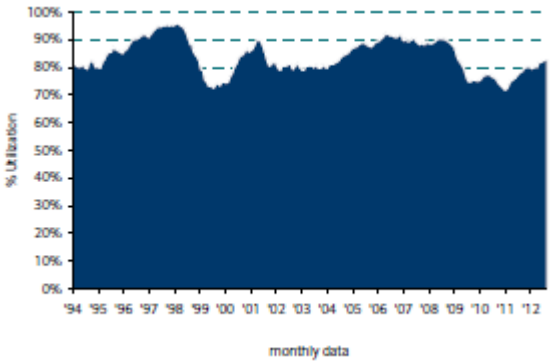
Ever since the spring of 2010 and the Deepwater Horizon disaster and Macondo well blowout, the offshore industry in the Gulf of Mexico has struggled to recover. After suffering through the

government imposed drilling moratoriums that were successfully challenged in the courts and overturned, the industry then suffered from the "permitorium" in which the new government procedures for reviewing and approving offshore drilling and development permits needed to be deciphered and implemented delaying the issuance of new permits. Besides fathoming the new permitting rules and procedures, offshore drilling equipment needed to be inspected and modified to meet new rules.

The cessation of offshore activity in the Gulf of Mexico had an impact on the worldwide offshore drilling rig fleet

The cessation of offshore activity in the Gulf of Mexico had an impact on the worldwide offshore drilling rig fleet. As shown in Exhibit 3, the worldwide offshore drilling industry in early 2010 was recovering following the financial crisis of 2008-9 at the time the Deepwater Horizon disaster struck. As the Gulf of Mexico activity shut down following the accident, the worldwide offshore rig utilization rate fell from roughly 79% to 72% by the end of 2010. That was the point when the Gulf began to recover. Since then, higher world oil prices helped stimulate offshore drilling in international markets that complemented the Gulf recovery and boosted the overall fleet utilization rate into the low 80s%.

Exhibit 3. Global Offshore Rig Utilization



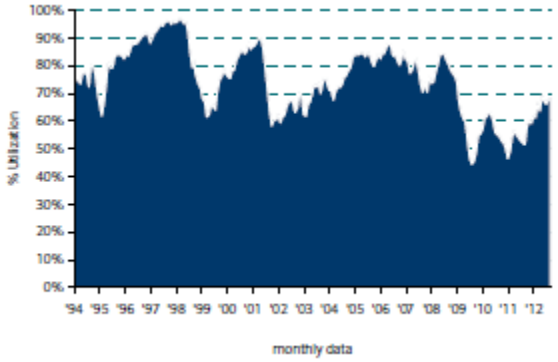
Source: Petrodata/Barclays

The Gulf of Mexico rig count is on the upswing and will be aided by additional rigs targeted to come to this market to work between now and the end of 2013

To understand the role of Gulf of Mexico rig activity on the overall worldwide rig fleet merely look at the chart in Exhibit 4 and notice the much sharper upward move in the Gulf's utilization rate than the world rate (Exhibit 3). From the Gulf's fleet utilization rate of roughly 45% at the end of 2010, the rate has moved up into the upper 60% range now. Remember these utilization rates include a number of rigs that are inactive and may be candidates for retirement. Regardless, the Gulf of Mexico rig count is on the upswing and will be aided by additional rigs targeted to come to this market to work between now and the end of 2013.

The Gulf of Mexico market for jackup rigs has also strengthened in a sawtooth pattern since the bottom following the financial crisis. The most recent slight dip in the jackup fleet activity reflects the impact of

Exhibit 4. GOM Offshore Rig Utilization Rate

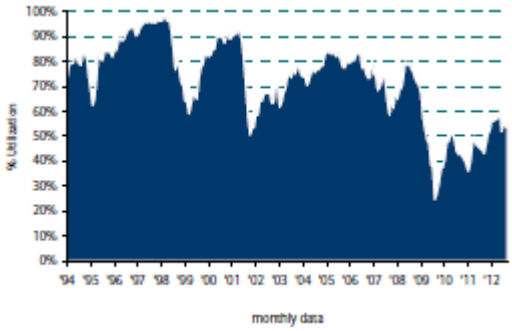


Source: Petrodata/Barclays

The recent firming in natural gas prices will likely support some additional shallow-water drilling

weak natural gas prices on shallow water jackups. As we head into the winter heating season, the recent firming in natural gas prices will likely support some additional shallow-water drilling, but possibly a more important driver is the shift in shallow-water acreage from traditional players to new, often private-equity backed companies. As they have only recently acquired those properties, the lag in getting organized will probably not extend much into 2013, so we look for a further upturn in shallow-water drilling next year.

Exhibit 5. GOM Jackup Rig Utilization

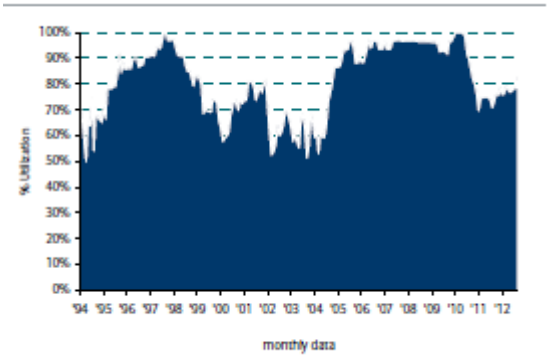


Source: Petrodata/Barclays

Due to the drilling moratorium, a number of the very deepwater-capable semis elected to leave the Gulf for work elsewhere

The Gulf of Mexico semi-submersible drilling rig fleet, targeting deepwater prospects, was at nearly 100% utilization when Macondo happened. Due to the drilling moratorium, a number of the very deepwater-capable semis elected to leave the Gulf for work elsewhere. This left a smaller fleet in the Gulf with a disproportionately higher number of older, less capable rigs. The recovery in deepwater semi drilling is continuing as the upward sloping line would suggest. Deepwater is the category of rigs in the Gulf expected to grow over the next 18 months as newbuild semis arrive. We expect to see that upward slope of the rig fleet utilization to continue until the industry gets back to around 90% utilization.

Exhibit 6. GOM Semi Rig Utilization Rate

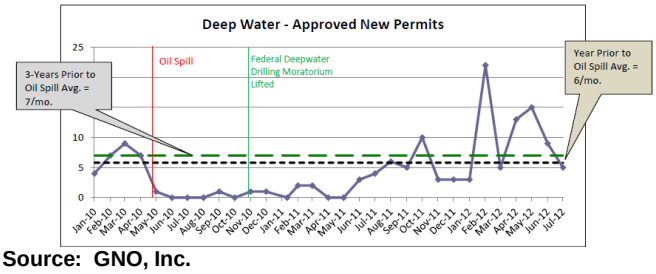


Source: Petrodata/Barclays

In the deepwater market, most months this year show that permits approved have matched or exceeded the latest three-year and one-year averages

One of the great challenges for the offshore industry in the Gulf of Mexico is getting permitting back to a pace ensuring that drilling rigs working here are fully utilized. The Greater New Orleans, Inc. (GNO) regional economic development alliance of the 10-parish region of Southeast Louisiana has begun to publish an index of Gulf of Mexico approved permits based on government data. In its report, GNO includes three charts showing how the Gulf of Mexico permitting activity is tracking versus the average for the last year and last three years. Two of the charts show the number of permits approved monthly since January 2010 for deep water and shallow water. The GNO's latest report shows the permitting activity through the end of July. In the deepwater market, most months this year show that permits approved have matched or exceeded the latest three-year and one-year averages.

Exhibit 7. Deepwater Permits On Pace Now



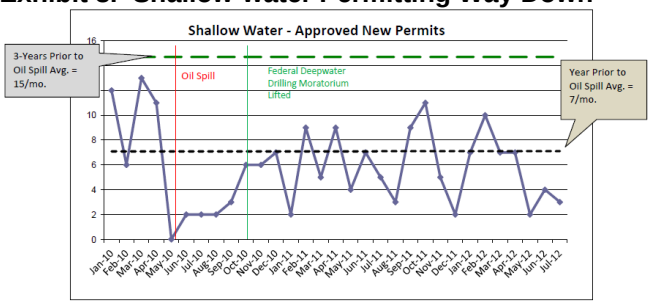
Source: GNO, Inc.

Shallow water permits are well below the last three-year average

That is not the case for shallow water permits, which for 2012 are well below the last three-year average and for about half the time, have matched or fallen short of the latest one-year average. A lack of sufficient shallow water permits is a likely reason why the jackup drilling rig fleet utilization rate still lags behind where it should be otherwise.

What these charts don't convey is the number of permit filings the industry has made. That issue is partially addressed by the third

Exhibit 8. Shallow-water Permitting Way Down

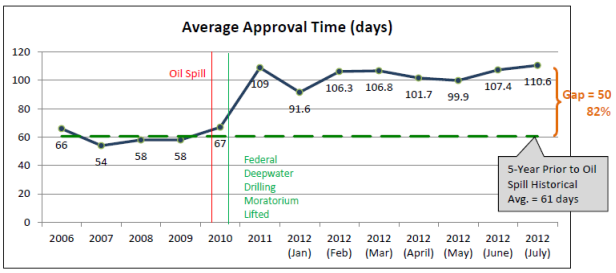


Source: GNO, Inc.

While in the past the government needed an average of about 61 days to approve a permit application, it now routinely requires in excess of 100 days

chart prepared by GNO. It shows in days the average approval time for a permit. In the chart, they calculated the five-year average time required for permit approval prior to the Deepwater Horizon accident. While in the past the government needed an average of about 61 days to approve a permit application, it now routinely requires in excess of 100 days. As the chart in Exhibit 9 shows for the month of July, there was a 50 day gap between the five-year average and the actual monthly average, or 82% more time.

Exhibit 9. Gap In Time For Permits Wide



Source: GNO, Inc.

Further progress needs to be made for the industry to ensure it has a sufficient backlog of permits to keep the offshore contractors and service companies fully employed in the future

The offshore industry is obviously much happier today than it was in late 2010. Demonstrative progress in improving the offshore permitting process has been made. Further progress needs to be made for the industry to ensure it has a sufficient backlog of permits to keep the offshore contractors and service companies fully employed in the future. Hopefully, the longer the industry and government work together on this process, the faster it will get. We recognize, however, that the new requirements for permits have added time to the prior process so it is unlikely we will ever return to the pre-Macondo average permitting time. That doesn't mean reducing the time required to secure a drilling permit shouldn't be a goal.

Hurricane Sandy Becomes Magnet For Global Warming Hype

Last week's mega storm, Hurricane Sandy, was initially thought to be the "perfect storm" as it came out of the Eastern Caribbean

across Cuba and headed up the U.S. East Coast. The storm, a minimal hurricane, was projected to roar ashore somewhere in the Northeast and then collide with a cold front that had dropped down from Canada and was moving eastward from the Midwest. Those two weather systems would help create forces that generate a Nor'easter, which is often more damaging for coastal areas of New England than a hurricane. As Sandy slowly made its way up the East Coast, weather forecasters began to predict significant coastal problems due to hurricane winds, but more importantly, cyclically high tides due to the phase of the moon. These high tides, whipped by high winds would create storm surges that were likely to exceed anything seen in previous storms. That meant there were many low-lying areas where flooding would be of major concern. Government and political officials took note and began issuing mandatory evacuation orders for these areas on Sunday, even though the storm was not projected to make landfall until Monday evening.

Those two weather systems would help create forces that generate a Nor'easter, which is often more damaging for coastal areas of New England than a hurricane

These evacuation warnings proved prescient as Sandy's speed accelerated from a pedestrian six miles per hour on Saturday to in excess of 20 miles per hour on Sunday. As the East Coast prepared for the worst by declaring states of emergency from Virginia to Rhode Island and citizens evacuated and prepared to stop all activity on Monday, the first blogs and television comments about how Sandy must be related to global warming or climate change and the world was doomed for more of this extreme weather due to governments not tackling rising CO_2 emissions. Al Gore blogged about Sandy and climate change, but that was no big surprise.

These evacuation warnings proved prescient as Sandy's speed accelerated from a pedestrian six miles per hour on Saturday to in excess of 20 miles per hour on Sunday

Late Monday afternoon we happened to catch a segment of NBC's Evening News with Brian Williams interviewing a meteorologist from The Weather Channel (a sister network of NBC) who was reporting on the prospective storm surge anticipated at Battery Park at the tip of Manhattan. Mr. Williams couldn't resist asking about how much global warming was responsible for Sandy and all the future Sandys the Northeast is destined to experience. The meteorologist said the storm's size and strength was directly due to climate change and the lack of government response. (We have no knowledge whether this meteorologist has any training in climate science.) He then went on to say that we didn't need a 1,000 years' worth of temperature data only the last 30 to know that the climate is warming and man is causing it. We were frankly dumbfounded by that statement, which of course was not questioned by Mr. Williams. Historical temperature records and proxy measurements of historical temperatures show that there have been centuries when temperatures warmed or cooled. To say that the last 30 years' worth of data proves anything was irresponsible, but politically correct in certain circles.

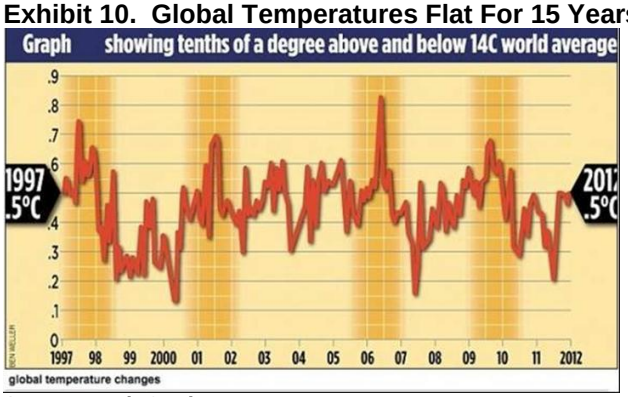
The meteorologist said the storm's size and strength was directly due to climate change and the lack of government response

Recently, the Met Office Hadley Center in the U.K. in association with the Climate Research Unit of the University of East Anglia published its latest global temperature data set showing that

Between 1997 and 2012 there has been essentially no change in temperatures in contrast with what was claimed and predicted by the global climate models

between 1997 and 2012 there has been essentially no change in temperatures in contrast with what was claimed and predicted by the global climate models. No sooner was this data release than some of the notable global warming proponents started saying that 15 years was not enough time to disprove their theory and computer models, even though that was the same length of time (1980-1996) when temperatures rose that propelled the global warming argument. The global warming promoters claimed there were many periods of 15 years in which natural climate trends paused. These are the same scientists who claimed that 15 years was of sufficient length to establish that the world was headed to a climate that would be 2.2^{o} Celsius warmer by the end of the century and how the world and its population would be impacted.

Exhibit 10. Global Temperatures Flat For 15 Years



Source: ***MainOnLine.com***

To date, virtually all his scare scenarios have proven wrong, and importantly errors have been identified in his temperature database

The father of the global warming doomsday scenario is James Hansen, the head of NASA's Goddard Institute for Space Studies. In 1988, he presented a paper to a Congressional committee demonstrating rapidly rising global temperatures and how those would lead to serious economic and social problems. To date, virtually all his scare scenarios have proven wrong, and importantly errors have been identified in his temperature database. The most interesting aspect of Dr. Hansen's presentation was its staging to reinforce the idea of an impending global warming catastrophe.

In a 2007 Public Broadcasting System interview, former Colorado Senator Tim Wirth gloated about how he had rigged the 1988 Senate hearing to dramatize Dr. Hansen's scary testimony

In a 2007 Public Broadcasting System interview, former Colorado Senator Tim Wirth gloated about how he had rigged the 1988 Senate hearing to dramatize Dr. Hansen's scary testimony. Sen. Wirth said, "We called the Weather Bureau and found out what historically was the hottest day of the summer…So we scheduled the hearing that day, and bingo, it was the hottest day on record in Washington or close to it." He then went on to say, "What we did is that we went in the night beforehand and opened all the windows…so the air conditioning wasn't working inside the room…when the hearing occurred, there was not only bliss, which is television cameras and double figures, but it was really hot." The Congressional hearing took its direction from Marshall McLuhan who

Sweating Congressional leaders and the media left the hearing room believing that the world was locked on a course to a hotter planet

said, “The medium is the message.” When everyone is hot and they hear about rising global temperatures, the willingness to believe in the obvious is enhanced. Sweating Congressional leaders and the media left the hearing room believing that the world was locked on a course to a hotter planet that posed a danger to the world’s population unless we radically changed our current lifestyle.

The debate merits a serious examination because it reflects how federal grant money has become a powerful influence that is corrupting science absolutely

Some day we will write more about the climate change debate as it is an interesting issue fraught with struggles between pseudo-science and serious scientific inquiry. The debate merits a serious examination because it reflects how federal grant money has become a powerful influence that is corrupting science absolutely. It also reflects a variation on the warning President Dwight Eisenhower issued as he left office in 1961 about the dangers of the military and industrial complex, only in this case it is the unholy alliance between government and academia. Most of the “science” of climate change analysis is based on computer models. Our experience doesn’t allow us to trust them, largely because our graduate economics training involved studying with one of the early pioneers of econometric modeling. From him and our first post-graduate job that involved developing econometric models of industries for investment analysis, we became too familiar with the shortcomings of models.

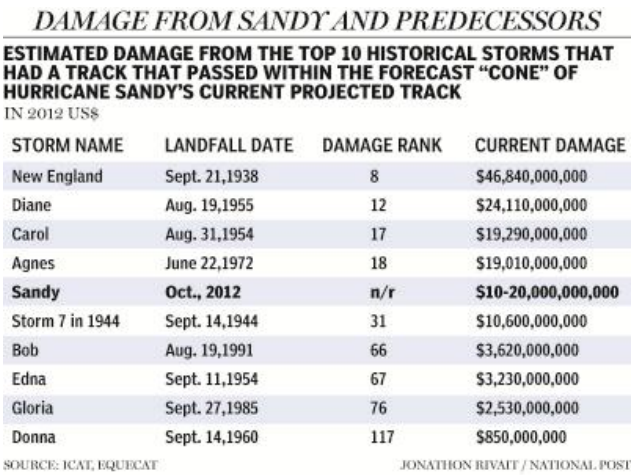
Based on our experience, we discounted much of the hysteria coming from the media about Sandy

We were also fascinated by the focus on guestimates about how expensive the storm damage from Sandy would be and the talk about how the flooding had never happened like this before. On Tuesday, we watched a segment on Squawk Box on CNBC with a reporter on the shoreline in Stamford, Connecticut. She was pointing out how high the storm surge had gotten on a row of single-family homes along the shore. What we found interesting is that we grew up in that part of Connecticut and my father, an industrial engineer with Pitney-Bowes (PBI-NYSE) in Stamford, was often called in to help the rest of the labor force hoist the machines up by chains suspending them above the anticipated flood level as hurricanes approached. Flooding was a regular event in the hurricanes of the 1950s that hit the Southern New England states. That was the last time when there were numerous powerful hurricanes in the region. Based on our experience, we discounted much of the hysteria of the media about Sandy, almost all of whom were too young to have experienced the storms of the 1950s.

Then someone came out with an estimate that it could range as high as $100 billion

With respect to the amount of damage caused by Sandy, the initial guesses provided by risk measurement firms were that the damage would be between $20 billion and $40 billion. Then someone came out with an estimate that it could range as high as $100 billion. Immediately, that estimate was discounted, but it didn’t stop investment shows from playing up the companies that stood to benefit from the preparation for the storm and the rebuilding that would follow. Economists were throwing out estimates of how much lost economic activity there would be and how that would impact the

Exhibit 11. Sandy Damage Estimate Will Rise



DAMAGE FROM SANDY AND PREDECESSORS

ESTIMATED DAMAGE FROM THE TOP 10 HISTORICAL STORMS THAT HAD A TRACK THAT PASSED WITHIN THE FORECAST "CONE" OF HURRICANE SANDY'S CURRENT PROJECTED TRACK

IN 2012 US$

STORM NAME	LANDFALL DATE	DAMAGE RANK	CURRENT DAMAGE
New England	Sept. 21,1938	8	$46,840,000,000
Diane	Aug. 19,1955	12	$24,110,000,000
Carol	Aug. 31,1954	17	$19,290,000,000
Agnes	June 22,1972	18	$19,010,000,000
Sandy	**Oct., 2012**	**n/r**	**$10-20,000,000,000**
Storm 7 in 1944	Sept. 14,1944	31	$10,600,000,000
Bob	Aug. 19,1991	66	$3,620,000,000
Edna	Sept. 11,1954	67	$3,230,000,000
Gloria	Sept. 27,1985	76	$2,530,000,000
Donna	Sept. 14,1960	117	$850,000,000

SOURCE: ICAT, EQUECAT JONATHON RIVAIT / NATIONAL POST

Source: ***National Post***

Maybe we should be re-examining the rationale for putting more and more people in cities

fourth quarter GDP estimates, but that was countered with estimates of the lift to the economy from the sale of new cars to replace flooded ones and the rebuilding of damaged and destroyed homes and businesses. That is a game that in the grand scheme of the economy and its future is not worth playing. The 100 lives lost are a more noteworthy consideration. Also, maybe we should be re-examining the rationale for putting more and more people in cities. One bad storm can make it worse for many more people at once than if they were located in the suburbs. It also complicates the logistics of caring for people after a storm.

The media that believes in global warming will try its best to link Sandy to the changing climate

For the media, Sandy will probably receive the attention of Katrina. The attention will be largely due to the population concentration and that it hit the mainstream media where it lives. How many past hurricanes of significant impact and economic cost have come and gone with little lasting attention? See the table in Exhibit 11. The media that believes in global warming will try its best to link Sandy to the changing climate even though all the real climate experts have stated categorically there is yet to be any link established between climate change and extreme weather.

Shale Gas Being Attacked On Safety And Emissions

The entire technological foundation of hydraulic fracturing of oil and gas bearing shale formations has been attacked by a study prepared by the GAO

The American shale revolution, which has turned conventional U.S. energy strategy on its head, has recently come under attack on two fronts and from two studies. On one hand, the entire technological foundation of hydraulic fracturing of oil and gas bearing shale formations has been attacked by a study prepared by the federal government's General Accounting Office (GAO). The other study, prepared by the Tyndall Manchester Center for Climate Change

Research in the UK, challenges the view that just because the United States has increased its use of natural gas in place of coal in generating electricity, global carbon emissions have not been reduced. In fact, these emissions may be greater.

It appears the GAO can't point to a definitive study documenting these risks

In the case of the GAO study, which appears to be based on a review of a number of recent studies dealing with air and water quality due to the increased use of hydraulic fracturing over the past several years, they essentially found few problems. Rather, the GAO weighed in with a view that there is no conclusive evidence of fracturing's inherent safety. The conclusion seems to be a case of being unable to disprove a negative conclusion. With respect to air quality, the GAO study had the following to say. "According to a number of studies and publications we reviewed, shale oil and gas development pose risk to air quality. These risks are generally the result of engine exhaust from increased truck traffic, emissions from diesel-powered pumps used to power equipment, intentional flaring or venting of gas for operational reasons, and unintentional emissions of pollutants from faulty equipment or impoundments." It appears the GAO can't point to a definitive study documenting these risks. And then the GAO points to state regulators from Pennsylvania who say that the fracturing process does little of consequence to hurt human health.

Again, no real evidence tying fracturing to groundwater pollution

With respect to water contamination, the GAO references a 2012 University of Texas study on drilling that discusses the potential impact on watersheds susceptible to temperature changes due to reduced water flows after withdrawal of water for fracturing. They also cite three studies from 2011 – the Center for Rural Pennsylvania that found "no statistically significant increases in pollutants" and the Ground Water Protection Council that also found no incidents of groundwater contamination caused by fracturing. The GAO also pointed to a Duke University study of the Marcellus and Utica shale formations that found methane in watersheds regardless of whether fracturing had occurred. Again, no real evidence tying fracturing to groundwater pollution.

But the GAO then cautioned that there was insufficient evidence to definitively make that call

The GAO wrote, "Regulatory officials we met with from eight states – Arkansas, Colorado, Louisiana, North Dakota, Ohio, Oklahoma, Pennsylvania and Texas – told us that, based on state investigations, the hydraulic fracturing process has not been identified as a cause of groundwater contamination within their states." But the GAO then cautioned that there was insufficient evidence to definitively make that call. Really? The GAO suggests there needs to be greater monitoring and transparency of the chemicals injected downhole. To us, this report is another step toward building the case for federal regulation of fracturing.

Turning to the Tyndall Center report, the case is made that while U.S. carbon emissions have fallen by 8.6% since 2005 due to the increased use of shale gas in generating electricity and the

According to the researchers unless either coal exports are stopped, total carbon emissions will be greater with the development and increased use of shale gas

corresponding reduction in the use of coal, the fact that U.S. coal exports rose during this period, global carbon emissions have gone up. According to the researchers (and this is their second such report) unless either coal exports are stopped, i.e., the coal is left in the ground, total carbon emissions will be greater with the development and increased use of shale gas.

Where exactly do they think all their additional power will come from- the Tooth Fairy?

Since the Tyndall Manchester study was done in England, which is burning more coal due to the decline in its onshore and North Sea gas resources and the fact that imported coal is cheaper than imported liquefied natural gas (LNG), there is a clear bias against coal. But to blame the development of the U.S. gas shale deposits for an increase in global carbon emissions since more coal is being exported from the U.S. is difficult to understand. Where exactly do they think all their additional power will come from- the Tooth Fairy?

Canada Weighs "Net Benefits" Of CNOOC/Nexen Deal

Because of the commitments CNOOC made to Canada as part of the deal, it was assumed the government of Prime Minister Stephen Harper would approve it

By the end of this week, the Canadian government is supposed to render an opinion on the "net benefits" for the country from the $15.1 billion cash purchase of Nexen Inc. (NXY-NYSE) by CNOOC Ltd. (CEO-NYSE), the publicly-listed subsidiary of state-owned China National Offshore Oil Company. When the deal was first announced, the question of whether Canada would allow the transaction to go forward was a focal point. Because of the commitments CNOOC made to Canada as part of the deal, it was assumed the government of Prime Minister Stephen Harper would approve it. That certainty disappeared, however, when the government, at literally the last minute (three minutes before midnight on the last night of review), rejected the proposed $5.2 billion purchase of Progress Energy Resource Corporation (PRQNF-Nasdaq) by Malaysia's state-owned oil and gas company Petronas. The government didn't completely diss the proposed deal, but rather allowed Petronas an additional 30 days to submit a new proposal.

To date, the "net benefits" test has been in theory simply determining whether a deal is economically good for Canada, which has meant whether it will create jobs or wealth in Canada

The Canadian government continues to wrestle with just how to apply its ill-defined "net benefits" test that is the standard against which all deals involving foreign buyers of Canadian companies are to be judged. This murky test needs clarification or Canada risks scaring away substantial sources of capital needed to develop the country's extensive natural resources. To date, the "net benefits" test has been in theory simply determining whether a deal is economically good for Canada, which has meant whether it will create jobs or wealth in Canada. For privately-owned companies this is probably the correct test. The complication comes when the buyer is a state-owned enterprise since that conjures up the thought that the foreign government might try to hoard the resources for itself or use its economic power in Canada to influence the government over various trade or foreign policy actions.

Looming in the background of this deal is the growing history of China's use of state-owned or state-financed companies securing natural resources that the country needs to power its growing economy

The lack of information about specifically why Ottawa turned down the Petronas/Progress deal caused many to speculate that the decision was intended as a "shot across the bow" of CNOOC, and that the Canadian government wanted it to further introduce safe-guards against actions that would be clearly one-sided. Looming in the background of this deal is the growing history of China's use of state-owned or state-financed companies securing natural resources that the country needs to power its growing economy while opening up new commercial trading relationships. The experience of Africa comes to mind as the test case of China's commercial strategy.

All of this trade helps China promote the trading of its currency, which is a step toward the government's long-term effort to make the Yuan a reserve currency

Between 2004 and 2011, Chinese foreign direct investment (FDI) to Africa grew sevenfold, or at an annual rate of about 115%. This FDI has been part of the Chinese government's "going global" strategy to seek to secure natural resources as well as support the interests of Chinese state-owned enterprises. The Chinese government's investment has been assisted by loans from China's Export-Import Bank and the China Development Bank. The banks make loans to African governments and the funds are then assigned to projects approved by the Chinese government and in exchange for preferential treatment for Chinese project contractors or Chinese exporters with 50% or greater content. All of this trade helps China promote the trading of its currency, which is a step toward the government's long-term effort to make the Yuan a reserve currency.

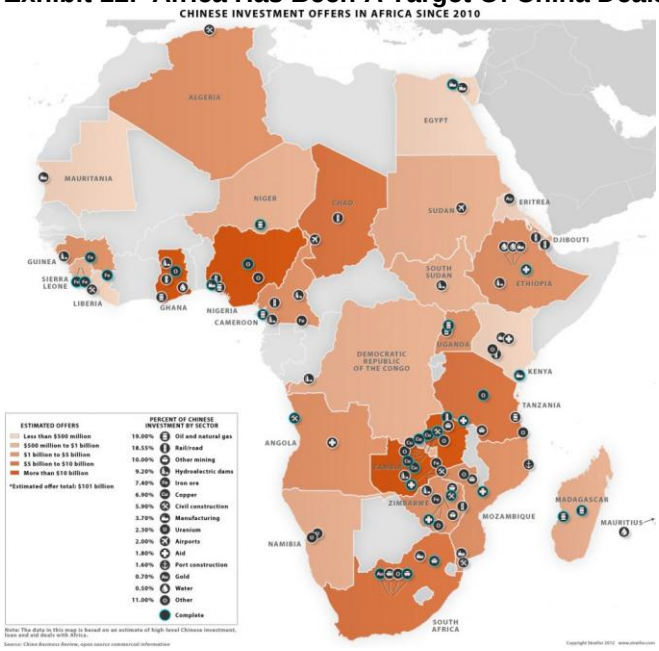
By 2016 China will be Africa's largest trading partner surpassing Europe

In 2000, China's bilateral trade with Africa amounted to $7.3 billion. In 2010, this trade was a record $126.9 billion and by November 2011 it had surpassed $151.4 billion. During 2004-2010 trade between China and Africa grew at 33.6% per year. Over the same period, European Union-Africa trade grew 11% per year, while US-Africa trade increased at an 18% annual rate. If all these growth rates continue, by 2016 China will be Africa's largest trading partner surpassing Europe.

These investments are largely concentrated in natural resources, infrastructure and manufacturing

To understand the growing power of China in Africa, one needs only look at the map from economic and political strategy firm, *Stratfor*. The map shows the extent of the Chinese involvement in this rapidly emerging and growing continent. These investments are largely concentrated in natural resources, infrastructure and manufacturing. The involvement of Chinese contractors has also provided an outlet for the country's large population.

Exhibit 12. Africa Has Been A Target Of China Deals



Source: ***Stratfor***

These investments drew the attention of the U.S. government

Earlier this year, China was involved in a program to invest $20 billion in various African countries. These investments drew the attention of the U.S. government. In a speech, Secretary of State Hilary Clinton said that African countries should consider partnerships with more responsible countries as against countries that exploit resources, an unmistakable reference to China. This prompted Chinese state news-agency Xinhua to write, "Whether Clinton was ignorant of the facts on the ground or chose to disregard them, her implication that China has been extracting Africa's wealth for itself is utterly wide of the truth."

"These foreign investment projects are also a boon for Beijing, since China needs African resources to sustain its domestic economy"

Here is how *Stratfor* assessed the Chinese investment efforts: "However, since many African countries lack the indigenous engineering capability to construct these large-scale projects or the capital to undertake them, African governments with limited resources welcome Chinese investments enthusiastically. These foreign investment projects are also a boon for Beijing, since China needs African resources to sustain its domestic economy, and the projects in Africa provide a destination for excess Chinese labor."

In a fascinating article examining the growing Chinese investment in Africa and the myths about the total exploitation of the continent's natural resources, Standard Chartered Bank's economist, Sarah Baynton-Glen, pointed out that for Africa, the challenge will be to ensure that it is securing the maximum benefit from increased engagement with China. She went on to point out that with Europe, still Africa's largest trading partner, entering a phase of potentially

China has lots of money and labor and a need for energy and other natural resources

slower growth, the China relationship will become even more important. We suspect Prime Minister Harper is looking at Canada's trade relationships with Europe and the United States and wondering what sort of a long-term relationship he should be trying to strike with China. Remember, China has lots of money and labor and a need for energy and other natural resources. All are ingredients that Canada could benefit from, especially with a potentially deteriorating relationship with the U.S. An interesting issue will be what influence the outcome of the U.S. election may have on Canada's decision about the CNOOC/Nexen deal.

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